Brown University Library Annex
31236090121081

THE JOURNAL OF THE TENNESSEE MEDICAL ASSOCIATION

LIBRARY OF THE RHODE ISLAND MEDICAL SOCIETY

TENNESSEE MEDICAL ASSOCIATION
129th Annual Meeting
Peabody Hotel, Memphis, Tennessee
April 12-15, 1964

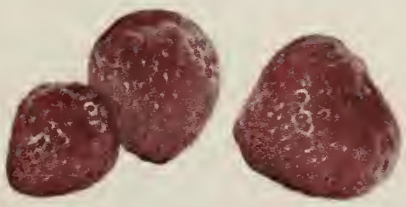
MID-SOUTH MEDICAL ASSEMBLY
Peabody Hotel, Memphis
February 11-14, 1964

JANUARY, 1964

Volume 57 **Number 1**

ble of Contents on Page IV
dex to Advertisers on Page XLII

tempting strawberry taste treat for your iron-deficient patients



Zentron® Chewable

Iron, Vitamin B Complex, and Vitamin C

Combines iron with B complex vitamins in a chewable tablet

Additional information available upon request.
Eli Lilly and Company, Indianapolis 6, Indiana.

Lilly

400137

Helps to make the epileptic's life more meaningful

Dilantin® Kapseals®
(Diphenylhydantoin sodium)

PARKE-DAVIS

Effective in control of grand mal and psychomotor seizures, this agent enables the epileptic patient to lead a useful life.

Indications: Grand mal epilepsy and certain other convulsive states. **Precautions:** Toxic effects are infrequent: allergic phenomena such as polyarthropathy, fever, skin eruptions, and acute generalized morbilliform eruptions with or without fever. Rarely, dermatitis goes on to exfoliation with hepatitis, and further dosage is contraindicated. Eruptions then usually subside. Though mild and rarely an indication for stopping dosage, gingival hypertrophy, hirsutism, and excessive motor activity are occasionally encountered, especially in children, adolescents, and young adults. During initial treatment, minor side effects may include gastric distress, nausea, weight loss, transient nervousness, sleeplessness, and a feeling of unsteadiness. All usually subside with continued use. Megaloblastic anemia has been reported. Nystagmus may develop. Nystagmus in combination with diplopia and ataxia indicates dosage should be reduced. Periodic examination of the blood is advisable.

PARKE-DAVIS

PARKE DAVIS & COMPAN Detroit Michigan 48232

824





Help protect the kidneys and other threatened organs

When treatment of hypertension is effective the danger of damage to the renal system is reduced.[1,2] "Hypertensive patients suffer from vascular deterioration roughly proportional to the severity of the hypertension... Reduction of blood pressure to normotensive levels reduces or arrests the progress of vascular damage with a resultant decrease in morbidity and mortality."[1] *Because Rautrax-N lowers blood pressure so effectively, it will help provide this important protection not only for the kidneys but also for the heart and brain of your hypertensive patients.* Rautrax-N is effective in mild,[3] moderate,[3,4] or severe hypertension.[4,5]

Dosage: Initially, 1 to 4 tablets daily preferably at mealtime. For maintenance, 1 or 2 tablets daily.

Side effects and precautions: Rauwolfia preparations may cause reversible extrapyramidal symptoms and emotional depression. Caution indicated in use with depression, suicidal tendencies, peptic ulcer. Minor side effects: diarrhea, weight gain, nausea, drowsiness. Bendroflumethiazide may cause reversible hyperuricemia and/or gout, unmask latent diabetes, increase glycosuria in diabetics. Caution indicated in use for patients on digitalis, with severely damaged kidneys, renal insufficiency, increasing azotemia, cirrhosis. Contraindicated in complete renal shutdown. Minor side effects: leg or abdominal cramps, pruritis, paresthesias, mild rashes.

Supply: Rautrax-N—capsule-shaped tablets providing 50 mg. Raudixin® [Rauwolfia serpentina whole root], 4 mg. Naturetin® [bendroflumethiazide], and 400 mg. potassium chloride. *Rautrax-N Modified*—50 mg. Raudixin [Rauwolfia serpentina whole root], 2 mg. Naturetin [bendroflumethiazide], and 400 mg. potassium chloride, in capsule-shaped tablets. For full information, see your Squibb Product Reference or Product Brief.

References: (1) Moyer, J. H., and Heider, C.: Am. J. Cardiol. 9:920 (June) 1962. (2) Brest, A. N., and Moyer, J. H.: Pennsylvania M. J. *63*:545 (Apr.) 1960. (3) Berry, R. L., and Bray, H. P.: J. Am. Geriatrics Soc. *10*:516 (June) 1962. (4) Hutchison, J. C.: Current Therap. Res. *4*:610 (Dec.) 1962. (5) Feldman, L. H.: North Carolina M. J.: *23*:248 (June) 1962.

SQUIBB
Squibb Quality
—the Priceless Ingredient
SQUIBB DIVISION Clin

RAUTRAX®-N RAUWOLFIA SERPENTINA WHOLE ROOT (50 MG.), BENDROFLUMETHIAZIDE (4 MG.) WITH POTASSIUM CHLORIDE (400 MG.), SQUIBB

The Journal of the TENNESSEE MEDICAL ASSOCIATION

Published Monthly

By Tennessee Medical Association

OFFICE OF PUBLICATION, 112 LOUISE AVENUE, NASHVILLE 5, TENNESSEE

Second Class Postage Paid at Nashville, Tennessee

Volume 57
No. 1

JANUARY, 1964

Per Year, $5.00
Single Copy, 50 Cents

Published Monthly

Contents

The Role of the Community Clinic in Care of the Psychotic Patient, ANDREW S. WACHTEL, M.D., Oak Ridge, Tenn. . . . 1

Conservative Management of Pre-Invasive Cancer of the Cervix and its Relationship to Pregnancy, SAMUEL S. LAMBETH, M.D., and ELGIN P. KINTNER, M.D., Maryville, Tenn. . . . 5

Case Report
Idiopathic Hemochromatosis Treated by Multiple Phlebotomies Over a Six and One-Half Year Period, ROBERT B. GILBERTSON, M.D., Knoxville, Tenn. . . . 9

Prolonged Diaphragmatic Paralysis Following Pulmonary Embolism, MORRIS PASTERNACK, M.D., Memphis, Tenn. . . . 13

Staff Conference . . . 16

Clinicopathologic Conference . . . 20

President's Letter . . . 28

Editorial . . . 29

Deaths . . . 32

Programs and News of Medical Societies . . . 32

National News . . . 33

Medical News in Tennessee . . . 34

Personal News . . . 36

Announcements . . . 37

Officers of TMA . . . 40

Instructions to Contributors

Manuscripts submitted for consideration for publication in the JOURNAL OF THE TENNESSEE MEDICAL ASSOCIATION should be addressed to the Editor, Dr. R. H. Kampmeier, Vanderbilt University Hospital, Nashville 12, Tennessee.

Manuscripts must be typewritten on one side of letter-weight paper. Either double or triple spacing and wide margins must be provided to facilitate editing which will be legible for the printer.

Bibliographic references should not exceed ten or twelve in number documenting key publications. They should appear at the end of the paper. The bibliographic references must conform to the style used in the American Medical Association publications, as,—Alais, F. G.: What Is Known About It, J. Tennessee M. A., 35:132, 1950.

Illustrations must be mounted on white cardboard and be numbered. The editor will determine the number, if any, of illustrations to be used. Additional illustrations will be charged to the author. The author's name should appear on the back of each illustration.

If reprints are desired, the requested number should be indicated in the letter accompanying the manuscript. The author will be billed by the publisher.

DEVOTED TO THE INTERESTS OF THE MEDICAL PROFESSION OF TENNESSEE
R. H. KAMPMEIER, M.D., Editor
This Association Does Not Officially Indorse Opinions Presented in Different Papers Published herein
Copyright, 1964, by the Tennessee Medical Journal



For peptic ulcer gastric hyperacidity and gastritis...

In year-long study on peptic-ulcer patients

New Creamalin®
Antacid Tablets

*"...faster in onset of action...and for a longer period"**

"Clinical studies in 85 patients with duodenal ulcer ...confirmed the superiority of the new preparation [new Creamalin] over standard aluminum hydroxide preparations, in that prompt relief was achieved and maintained throughout the period of observation."*

Patients were followed for about one year.

New Creamalin promotes ulcer healing, permits less frequent feedings because it is so long-acting. Heartburn and epigastric distress were "...easily and adequately controlled...."* New Creamalin has the therapeutic advantage of a liquid antacid with the convenience of a palatable tablet. *It does not cause constipation.*

Each new Creamalin tablet contains 320 mg. of specially processed highly reactive dried aluminum gel (stabilized with hexitol) with 75 mg. of magnesium hydroxide. Minute particles offer a vastly increased surface area.

Dosage: Gastric hyperacidity—from 2 to 4 tablets as needed. Peptic ulcer or gastritis—from 2 to 4 tablets every two to four hours. *How Supplied:* Bottles of 50, 100, 200 and 1000.

Now also available—New Creamalin Improved Formula Liquid. Pleasant mint flavor—creamy pink color. Stabilized reactive aluminum and magnesium hydroxide gel (1 teaspoon equals 1 tablet). Bottles of 8 and 16 fl. oz.

Creamalin, trademark reg. U.S. Pat. Off.

*Schwartz, I. R.:
Current Therap. Res. 3:29, Feb., 1961.

Winthrop LABORATORIES New York 18, N. Y.

Is There A Doctor - - - -

WHO WANTS TO DRIVE A NEW CAR—

With No Capital Investment . . . Simplified Tax Deductions . . . Which May Save You Money . . . And No Worries About—Maintenance . . . Depreciation . . . Tires . . . Insurance . . . Or License?

Call or Visit the Lease Department of

OAK FORD **SALES AND SERVICE**

915 FIFTH AVE. NORTH
NASHVILLE 3, TENN.

MOTORS

Tel. AL 5-8661

We are a member of Largest Leasing System in the U. S.

Ford **AUTHORIZED LEASING SYSTEM**

BIRTCHER ELECTRONICS FOR MEDICINE



If you are hot for heat, descriptives on the Bandmaster and a collection of scientific and clinical material on shortwave diathermy are yours for the asking.

WHAT'S SO HOT ABOUT HEAT? Heat was man's first therapy. Throughout the ages everything from hot mud to hot sun, natural thermal baths to hot water bottles, infrared lamps to diathermy have eased our discomforts. Of all these methods, only genuine shortwave diathermy has made it possible for the physician to create heat deep within the tissue, where it is most needed, without an appreciable rise in skin temperature. The Birtcher Bandmaster has for 15 years been the standard of excellence in shortwave diathermy throughout the U.S. and in 95 other lands.

Call or Write:

HOWARD JENNINGS

P. O. Box 9039, Knoxville, Tennessee 577-4793



"Upon arising, nose was open" . . . or how another happy patient describes the nasal decongestant action of Dimetapp Extentabs*—how would *your* patients describe it?/In Sinusitis, Colds, U.R.I., up to 10-12 hours' clear breathing on one tablet/Also available: Dimetapp Elixir, for t.i.d. or q.i.d. dosage.

Dimetapp® Extentabs®

[Dimetane® (brompheniramine maleate), 12.0 mg.; phenylpropanolamine hydrochloride, 15 mg.; phenylephrine hydrochloride, 15 mg.]

A. H. ROBINS CO., INC., RICHMOND 20, VA.

*CLINICAL REPORT ON FILE, MEDICAL DEPT., A.H. ROBINS CO., INC.

BRIEF SUMMARY: *Indications:* Dimetapp reduces nasal secretions, congestion, and postnasal drip for symptomatic relief of colds, U.R.I., sinusitis, and rhinitis. *Side Effects:* In high dosages, occasional drowsiness due to the antihistamine or CNS stimulation due to the sympathomimetics may be observed. *Precautions:* Administer with caution in cardiac or peripheral vascular diseases and hypertension. *Contraindications:* Antihistamine sensitivity. Not recommended for use during pregnancy.



Baker's T

VOL. 1 NO. 1 FORECAST: HAPPY MOTHERS AND BABIES

NEW 'UNDERC SOLVES DIAPE

Trio of suspects identified...

Bacteria a Prime Culprit Organisms such as Bacillus ammoniagenes and Alcaligenes faecalis metabolize urine into chemical irritants. Proper laundering of diapers helps reduce number of organisms, but cannot completely eliminate bacterial growth.

Ammonia and Urea Implicated Ammonia produced by microorganisms is a major cause of skin irritation that leads to diaper rash.

The Moisture—Maceration—Infection Cycle Moisture from urine and feces, combined with diaper friction, results in damp, macerated skin—an ideal environment for bacterial proliferation. In the absence of energetic countermeasures, the moisture—maceration—infection cycle continues, leads to chronic diaper rash problems.



aby News



BAKER LABORATORIES, INC.

OVER' AGENT
R RASH CASE!

Diapersil successful!

Bactericidal to Ammonia-Splitting Pathogens Diapersil contains benzalkonium chloride, which is rapidly 'cidal' to organisms implicated in diaper rash. Benzalkonium chloride has a proven record of effectiveness and safety.

Continued 'Uripellent' Protection Silicones in Diapersil form a water-resistant coating which shields the skin from bacterial by-products and from maceration. Silicones have been found outstandingly effective in diaper rash, even when other types of therapy have failed.

Soothing to Inflamed Skin Panthenol, incorporated in a soothing and non-sensitizing base, relieves itching and pain, and gently promotes healing. Diapersil thus provides prompt symptomatic relief in diaper rash as well as in other pediatric skin conditions.

BAKER'S DIAPERSIL™ CREME

Formula: panthenol, dimethylpolysiloxane, benzalkonium chloride, in a watermiscible, non-sensitizing cream base

To treat and prevent diaper rash, excoriated buttocks, chafing, heat rash and similar conditions

BAKER LABORATORIES, INC. Subsidiary of U.S. Vitamin & Pharmaceutical Corp.



release for hostility?

Overeating is often an outlet for feelings of hostility. Many people take out their anger by overindulgence at or between meals. As a result they become overweight.

'Eskatrol' *Spansule* capsules both control appetite and relieve the emotional stress that causes overeating. That's why so many patients are losing more pounds with 'Eskatrol'.

ESKATROL® Trademark

Each capsule contains Dexedrine® (brand of dextroamphetamine sulfate), 15 mg., and Compazine® (brand of prochlorperazine), 7.5 mg., as the maleate.

SPANSULE®

brand of sustained release capsules

because emotions play an important role in overweight

Brief Summary of Principal Side Effects and Cautions

Side effects (chiefly nervousness and insomnia) are infrequent, and usually mild and transitory. *Cautions:* 'Eskatrol' *Spansule* capsules should be used with caution in the presence of severe hypertension, advanced cardiovascular disease, or extreme excitability. There is a possibility, though little likelihood, of blood or liver toxicity or neuromuscular reactions (extrapyramidal symptoms) from the phenothiazine component in 'Eskatrol' *Spansule* capsules.

For complete prescribing information, please see *PDR* or available literature.

Supplied: Bottles of 50 capsules.

Smith Kline & French Laboratories SK&F

Special cough formula for children

Pediacof®

Each teaspoon (5 ml.) contains codeine phosphate 5 mg., Neo-Synephrine® hydrochloride (brand of phenylephrine hydrochloride) 2.5 mg., chlorpheniramine maleate 0.75 mg. and potassium iodide 75 mg.

soothing decongestant and expectorant



bright red, pleasant-tasting, raspberry-flavored syrup

Pediacof is different. It is designed especially for children, and each ingredient is in the right proportion. The potassium iodide in Pediacof is so well masked that it is virtually unnoticeable. Children like the sweet raspberry flavor of bright red Pediacof.

Dosage: Children from 6 months to 1 year, ¼ teaspoon; from 1 to 3 years, ½ to 1 teaspoon; from 3 to 6 years, 1 to 2 teaspoons; and from 6 to 12 years, 2 teaspoons. These doses are to be given every four to six hours as needed.

How supplied: Bottles of 16 fl. oz.

Available on prescription only.
Exempt Narcotic.

Side effects: The only significant untoward effects that have occurred are mild anorexia and an occasional tendency to constipation. However, discontinuance of Pediacof has seldom been required. Mild drowsiness occurs in some patients but, when cough is relieved, the quieting effect of Pediacof is considered beneficial in many instances.

Precautions and contraindications: Patients with tuberculosis or those who are known to be sensitive to iodides should not be given Pediacof.

Caution should be exercised if Pediacof is administered to patients with cardiac disorders, hypertension or hyperthyroidism.

Warning: May be habit forming.

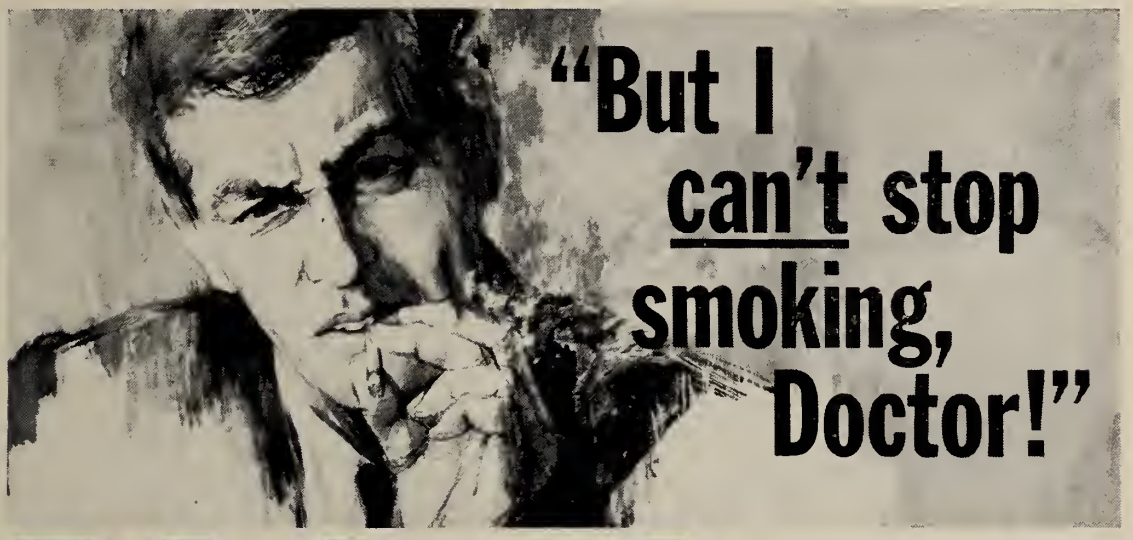
Winthrop Laboratories
New York, N.Y.

Winthrop

1843M


Butazolidin®
Geigy
brand of
phenylbutazone
Tablets of 100 mg.
Proved by over a
decade of clinical
experience
It works!
Geigy
Pharmaceuticals
Division of
Geigy Chemical
Corporation
Ardsley, New York
Geigy

When your patient says:



Nikoban® PASTILLES

BRAND OF LOBELINE SULFATE, MRT

help curb the smoking habit

- Help induce a feeling of satiety similar to that of tobacco because of lobeline's pharmacological relationship to nicotine.
- Permit the patient to indulge his oral fixation by substituting the NIKOBAN Pastille for tobacco.
- Utilize the anorexic effect of lobeline to help the patient who is driven to compulsive eating when he discontinues smoking.
- Encourage patient cooperation through pleasant taste.

Dosage and Administration: In order to obtain the maximum benefit, a NIKOBAN Pastille should be sucked slowly and taken according to the schedule below. Whenever possible a pastille should be taken after meals.

1st week: 1 pastille every 1 to 2 hours for a maximum of 12 pastilles daily. *2nd week:* 1 pastille every 3 hours. *3rd week:* 1 pastille every 4 hours. *4th week:* 1 pastille every 4 to 6 hours. *Thereafter* 1 pastille may be taken at infrequent intervals whenever necessary. In some instances there may at first be a slight astringent burr of the tongue and throat. This will usually disappear as treatment with NIKOBAN Pastilles progresses and is no cause for concern.

Caution: It is advisable neither to smoke nor to use a smoking deterrent during pregnancy.

Formulation: Each NIKOBAN Pastille contains 0.5 mg. lobeline sulfate in a pleasant tasting spiced-cherry base.

Availability: In packages of 50 pastilles.

References: 1. Goodman, L. S. and Gilman, A.: The Pharmacological Basis of Therapeutics, New York, Macmillan, 1960, Ed. 2, pp. 620-622; 2. Edmunds, C. W.: J. Pharmacol. and Exper. Therap., 1:27, 1909; 3. Hazard, R. and Savini, E. Gand., 92:471, 1963. 4. Dorsey, J. L.: Ann. Int. Med., 10:628, 1936; 5. Rasmussen, K. B.: Ugeskr.laeger, 118:222, 1956; 6. Ejrup, B.: Sven. lak. Tid., 53:2634, 1956; 7. Jochum, K. and Jost, F.: Munch. med. Wchnschr., 103:618, 1961; 8. Jost, F. and Jochum, K.: Med. Klin., 54:1049, 1959; 9. Smoking and Health, Summary and Report of the Royal College of Physicians of London on Smoking. New York, Pitman, 1962.

M. R. THOMPSON, Inc., Medical Department- BB
711 Fifth Avenue, New York, New York 10022

Gentlemen:
Please send me a trial supply of NIKOBAN Pastilles.

NAME_____ M.D.

ADDRESS_____

CITY_____ ZONE____ STATE_____

TYPE OF PRACTICE_____

M. R. THOMPSON, INC. • NEW YORK, NEW YORK 10022

Mid-South Post Graduate Medical Assembly

Seventy-fifth Annual Diamond Anniversary Meeting

Feb. 11-12-13-14, 1964—Hotel Peabody—Memphis, Tenn.

GUEST SPEAKERS

Dermatology

James W. Burks, M.D.—New Orleans, Louisiana
Professor of Clinical Medicine, Tulane University School of Medicine

General Practice

Carroll L. Whitten, M.D.—Louisville, Kentucky

General Surgery

Warren H. Cole, M.D.—Chicago, Illinois
Professor and Head of Department of Surgery, University of Illinois College of Medicine
Owen H. Wangensteen, M.D.—Minneapolis, Minnesota
Chairman Department of Surgery & Professor of Surgery University of Minnesota Medical School

Internal Medicine

Milford O. Rouse, M.D.—Dallas, Texas
Clinical Professor of Internal Medicine, University of Texas Southwestern Medical School
Robert H. Williams, M.D.—Seattle, Washington
Professor of Medicine, University of Washington

Obstetrics and Gynecology

Ernest W. Page, M.D.—San Francisco
Professor and Chairman, Department of Obstetrics and Gynecology, University of California Medical School
Travis A. French, M.D.—New Castle, Pennsylvania
Chief Obstetrics and Gynecology, Jameson Memorial Hospital and New Castle Hospital

Pathology

John L. Shapiro, M.D.—Nashville, Tenn.
Professor and Chairman of the Department of Pathology
Vanderbilt University School of Medicine

Neurosurgery

Charles A. Fager, M.D.—Boston, Massachusetts
Department of Neurosurgery, Lahey Clinic

Orthopaedic Surgery

Jack Wickstrom, M.D.—New Orleans, Louisiana
Professor and Chairman, Division of Orthopaedic Surgery, Tulane University

Pediatrics

Harris D. Riley, Jr., M.D.—Oklahoma City, Oklahoma
Director, Cystic Fibrosis Research Center, Children's Memorial Hospital, University of Oklahoma Medical Center
Harry C. Shirkey, M.D.—Birmingham, Alabama
Associate Professor of Pediatrics, Medical College of Alabama

Plastic Surgery

James Barrett Brown, M.D.—St. Louis, Missouri
Professor of Clinical Surgery, Washington University School of Medicine

Radiology

Robert D. Moreton, M.D.—Forth Worth, Texas
Bond Radiological Group

Religion and Medicine

Rev. Dr. Paul B. McCleave—Chicago, Illinois
Director, Department of Medicine and Religion, American Medical Association

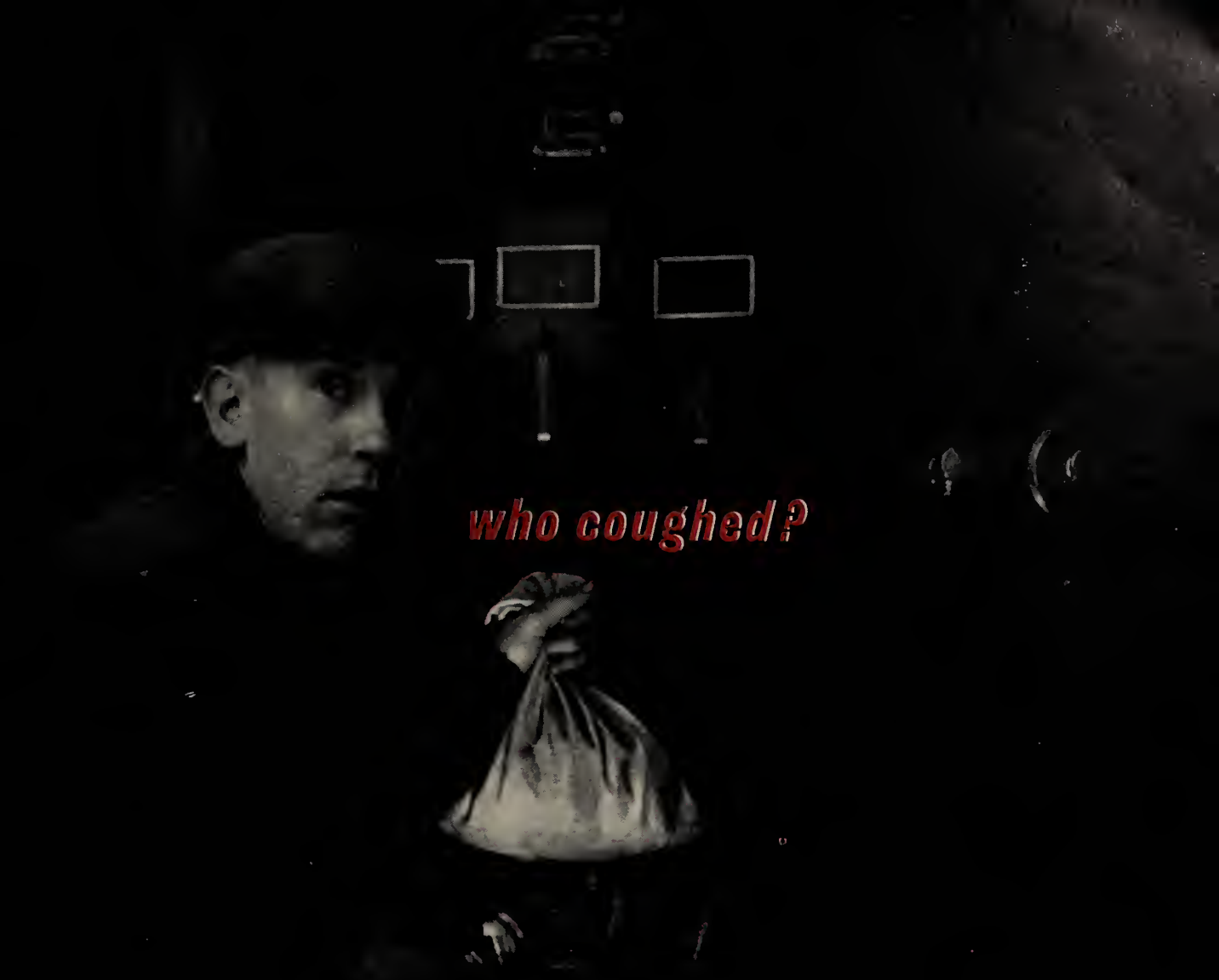
Rheumatology

John Lansbury, M.D.—Philadelphia, Pennsylvania
Professor of Clinical Medicine, Temple University School of Medicine

Urology

Wyland F. Leadbetter, M.D.—Boston, Massachusetts
Chief of Urology at the Massachusetts General Hospital

18 Outstanding Guest Speakers, Clinicopathologic Conference, 70 Technical Exhibits, 6 Scientific Exhibits, 3 Round-table Luncheons, Handicap Golf Tournament.



for fast and long-lasting cough control

HYCOMINE® SYRUP

Each teaspoonful (5 cc.) contains:

Hycodan®	
Hydrocodone bitartrate . . 5 mg. (Warning: May be habit-forming)	6.5 mg.
Homatropine methylbromide 1.5 mg.	
Pyrilamine maleate	12.5 mg.
Phenylephrine hydrochloride	10 mg.
Ammonium chloride	60 mg.
Sodium citrate	85 mg.

in a highly palatable, cherry-flavored vehicle (methylparaben 0.13% and propylparaben 0.02% as preservatives)

INDICATIONS: For both productive and nonproductive cough. For relief of symptoms in tracheitis, bronchitis, pneumonia, pharyngitis, bronchial asthma, pertussis, and allied conditions; cough associated with allergy; in general, whenever cough medication is indicated.

DOSAGE: Average adult dose—1 teaspoonful after meals and at bedtime with food. Children 6 to 12 years, ½ teaspoonful; 3 to 6 years, ¼ teaspoonful; 1 to 3 years, 10 drops; 6 months to 1 year, 5 drops; after meals and at bedtime. On oral Rx where state laws permit. U.S. Pat. 2,630,400.

CAUTION: Should be used with caution in patients with known idiosyncrasies to phenylephrine HCl and in patients with moderate or severe hypertension, hyperthyroidism or advanced arteriosclerosis. In these patients use should not exceed three days. Hycomine Syrup is generally well tolerated but in some patients drowsiness, dizziness or nausea may occur. May be habit-forming.

Endo®

Literature on request

ENDO LABORATORIES Richmond Hill 18, New York



Regardless
of the antibiotic
or sulfonamide
you prescribe...

remember
'Empirin'
Compound
to relieve
pain and
lower fever



Also: 'Empirin'® Compound with Codeine Phosphate*
gr. ⅛—No. 1/gr. ¼—No. 2/gr. ½—No. 3/gr. 1—No. 4
*Warning—may be habit forming

"They keep saying I'm sloppy!"



Nicozol® helps you restore your geriatric patients' interest in themselves

NICOZOL therapy can help you brighten the outlook of your aging patients who tend towards (1) untidiness, (2) irritability, (3) incompatibility, (4) lack of interest, and (5) loss of memory or alertness.

The NICOZOL formula helps improve mental acuity, increase the supply and use of oxygen in the brain, improve peripheral circulation—without excitation, depression, or other untoward effects.

NICOZOL can help you keep your aging patients actively alert and at ease with themselves, their families, and others.

Supplied: NICOZOL tablets (and capsules) in bottles of 100 and 1000. NICOZOL elixir in pints and gallons.

Precautions: May produce overstimulation in high doses. Discontinue if muscular twitchings or clonic convulsions occur. The flush produced in sensitive individuals is transient and harmless.

Average Dose: 1 to 2 tablets (or capsules) 3 times a day. 1 teaspoonful elixir 3 times a day.

Formula: Each tablet or capsule contains:
Pentylenetetrazol.....100 mg.
Nicotinic Acid.....50 mg.
Each teaspoonful (5 cc.) elixir contains:
Pentylenetetrazol.....200 mg.
Nicotinic Acid.....100 mg.
(as the sodium salt)
Alcohol.....5%

HART | Division of A. J. Parker Co. LABORATORIES Bryn Mawr, Pa., Winston-Salem, N.C.

NICOZOL®



Protects your angina patient better than vasodilators alone

'Miltrate' contains both pentaerythritol tetranitrate, which dilates the patient's coronary arteries, and meprobamate, which relieves his anxiety about his condition. Thus 'Miltrate' protects your angina patient better than vasodilators alone.

Pentaerythritol tetranitrate may infrequently cause nausea and mild headache, usually transient. Slight drowsiness may occur with meprobamate and, rarely, allergic reactions. Meprobamate may increase effects of excessive alcohol. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction. Like all nitrate-containing drugs, 'Miltrate' should be given with caution in glaucoma.

Dosage: 1 or 2 tablets *before meals* and at bedtime. Individualization required.
Supplied: Bottles of 50 tablets.

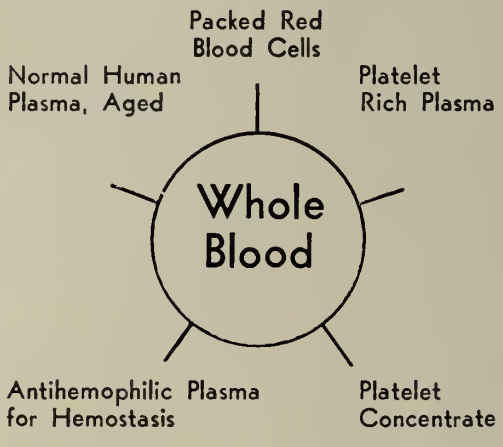
CML-9646

Miltrate®
meprobamate 200 mg.+
pentaerythritol tetranitrate 10 mg.

WALLACE LABORATORIES / *Cranbury, N. J.*

Follow the trend to

BLOOD COMPONENT THERAPY



Best for the patient and More Economical.

All available from

BLOOD BANK FOUNDATION

1921 Broadway ALpine 4-3551
NASHVILLE, TENNESSEE



ACHROCIDIN®

TETRACYCLINE HCl-ANTIHISTAMINE-ANALGESIC COMPOUND

Each Tablet contains:

ACHROMYCIN® Tetracycline HCl	125 mg.	Caffeine	30 mg.
Acetophenetidin (Phenacetin)	120 mg.	Salicylamide	150 mg.
		Chlorothen Citrate	25 mg.

Effective in controlling tetracycline-sensitive bacterial infection and providing symptomatic relief in allergic diseases of the upper respiratory tract. Possible side effects are drowsiness, slight gastric distress, overgrowth of nonsusceptible organisms, tooth discoloration. The last named may occur only if the drug is given during tooth formation (late pregnancy, the neonatal period, early childhood). Average Adult Dosage: 2 Tablets four times daily.

LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, New York

Lederle

7142-3



TRIPLE SULFA THERAPY is safe at levels of pH 5.5 or lower where the possibility of crystalluria would be greatest.

TRI-AZO-MUL
TRI-AZO-TAB

TRI-AZO-MUL

Each 100 cc contains:

Sulfadiazine (Microcrystalline)	3.381 gm.
Sulfamerazine (Microcrystalline)	3.381 gm.
Sulfamethazine (Microcrystalline)	3.381 gm.

In a palatable, stable emulsion pleasantly flavored with True Raspberry Flavor. Each average teaspoonful (80 min.) represents .5 gm. (7.7 grs.) of three combined sulfa drugs in suspension. Supplied in pint bottles only.

CONTRAINDICATIONS: Sulfonamides are potent drugs, and may cause toxic reactions. Sulfonamides, therefore, should be given only under constant supervision of a Physician.

TRI-AZO-TAB

Each tablet represents:

Sulfadiazine	0.166 gm. (2.57 gr.)
Sulfamerazine	0.166 gm. (2.57 gr.)
Sulfamethazine	0.166 gm. (2.57 gr.)

Available in White or Pink colored tablets in bottles of 100, 500 or 1,000.

TRI-AZO-MUL (citrated) offers the same formula as TRI-AZO-MUL (plain) with sodium citrate (17.5 gm.).

First Texas (FTP)
Pharmaceuticals, Inc.
DALLAS • ATLANTA • SINCE 1901

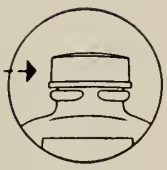
Another Established Need Product . . . .

HOW TO WIN FRIENDS...

little



New
Orange Flavored
Bayer Aspirin for Children
is sweet
all the way through,
so children
take it readily.
The GRIP-TIGHT CAP
on the bottle
helps keep them
from taking it
on their own.



Bottles of 50 tablets
(1¼ grains each)

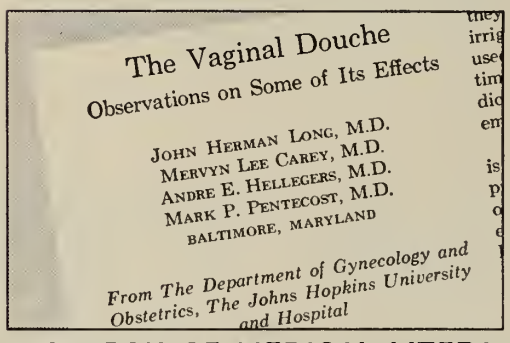
NOW!
NEW ORANGE FLAVOR!

We will be pleased to send
professional samples on request.

THE BAYER COMPANY
Division of Sterling Drug Inc. Dept. 11
1450 Broadway, New York 18, N.Y.

A Valuable Contribution To Medical Literature

A DEFINITIVE STUDY ON DOUCHING



The Vaginal Douche

Observations on Some of Its Effects

JOHN HERMAN LONG, M.D.
MERVYN LEE CAREY, M.D.
ANDRE E. HELLEGERS, M.D.
MARK P. PENTECOST, M.D.
BALTIMORE, MARYLAND

From The Department of Gynecology and Obstetrics, The Johns Hopkins University and Hospital

A SEARCH OF MEDICAL LITERATURE REVEALS NO COMPARABLE OBJECTIVE EVALUATION OF THE SUBJECT.

The authors state at the outset,

"Each physician has his own idea of the value or harm of the vaginal douche and many have expressed such ideas in writing. Such opinions have been arrived at without any intensive investigation or observation of subjects using douches as compared to those not using them. The purpose of this study is to report our observations on three groups of patients, one taking no douches, a second douching with a medicated solution* and a third douching with plain water."[1]

1. West. J. Surg., Obsts. & Gynec.: *71*:122-127, 1963

*The medicinal powder used in this study was META CINE®, a scientifically formulated preparation containing: papain, lactose, citric acid, methyl salicylate, eucalyptol, menthol and chlorothymol.

OBSERVATIONS BASED ON EXTENSIVE AND THOROUGH EXAMINATION SCHEDULE.

"One hundred patients were selected at random, regardless of their chief complaint, from the general population attending the Out-Patient Gynecology Clinic of The Johns Hopkins Hospital. Those selected were reexamined at 1, 3, 6, 9 and 12 months after the initial visit."

"At intervals patients were switched to the regimen of another group so that comparison of the effect of douching or not douching might be made in the same individual."

Three years were required to complete the study.

An evaluation of the objective findings of the study demonstrates that douching with META CINE® had the following effects on vaginal secretion:

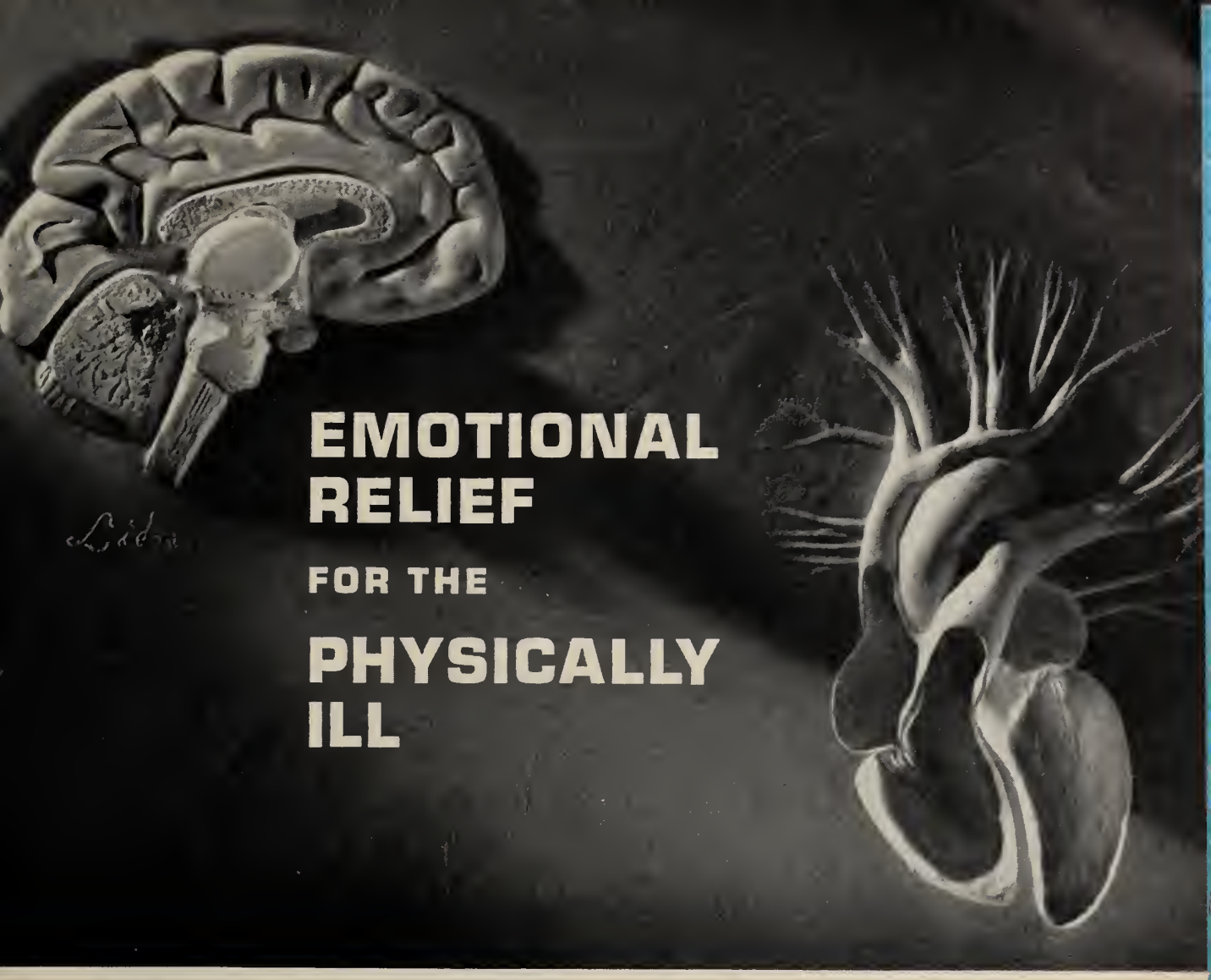
- increased Doderlein organisms,
- proved effective in lowering WBC counts,
- proved effective in increasing glycogen content.

META CINE® was found to be a good antagonist to vaginal discharge and irritation—and also proved effective in reducing cervicitis.

No untoward effects of douching were encountered in the study.

Reprints of the complete study and professional samples of Meta Cine are available on request.

BRAYTEN PHARMACEUTICAL COMPANY • *Chattanooga 9, Tennessee*



RELIEVES ANXIETY, APPREHENSION AND TENSION...



All day long

. . . keeps the patient calm, and the mind clear.



All night too

. . . aids restful sleep, with no barbiturate hangover.

MEPROSPAN®-400

(MEPROBAMATE 400 MG. SUSTAINED RELEASE)

Simplified, convenient dosage for emotional relief.

Side effects: 'Meprospan' (meprobamate, sustained release) is remarkably free of untoward reactions. Daytime drowsiness has not been reported. Rare allergic or idiosyncratic reactions may occur, generally developing after 1-4 doses of the drug.

Contraindications: Previous allergic or idiosyncratic reactions to meprobamate contraindicate subsequent use.

Precautions: Should administration of meprobamate cause drowsiness or visual disturbances, the dose should be reduced. Operation of motor vehicles or machinery or other activity requiring alertness should be avoided if these symptoms are present. Effects of excessive alcohol may possibly be increased by meprobamate. Prescribe cautiously and in small quantities to patients with suicidal tendencies. Massive overdosage may produce lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction; withdraw gradually after prolonged use at high dosage.

Complete product information available in the product package, and to physicians upon request.

Usual adult dosage: One 400 mg. capsule or two 200 mg. capsules at breakfast; repeat with evening meal.

Supplied: 'Meprospan'-400 (meprobamate 400 mg.), 'Meprospan'-200 (meprobamate 200 mg.), each in sustained-release capsules. Both potencies in bottles of 30.

CME-760

WALLACE LABORATORIES *Cranbury, N. J.*

reduce or obviate the need for transfusions and their attendant dangers

KOAGAMIN is indicated whenever capillary or venous bleeding presents a problem.

KOAGAMIN has an outstanding safety record -- in 25 years of use no report of an untoward reaction has been received; however, it should be used with care on patients with a predisposition to thrombosis.



KOAGAMIN®

parenteral hemostat

Each cc contains: 5 mg. oxalic acid, 2.5 mg. malonic acid, phenal 0.25%; sodium carbonate as buffer.

Complete data with each 10cc vial. Therapy chart on request.

CHATHAM PHARMACEUTICALS, INC.
Newark 2, New Jersey
Distributed in Canada by Austin Laboratories, Ltd. • Paris, Ontario



Doctor, you can take it with you!



THE BURDICK EK-III **DUAL-SPEED ELECTROCARDIOGRAPH**

- 26½ pounds light, including all accessories and carrying case! Ideal for office or bedside use
- 25 or 50 mm. speed — an accurate record for an accurate diagnosis
- frequency response greatly in excess of minimum A.M.A. standards
- top-loading paper drive eliminates tedious paper-threading adjustments

Burdick

THE BURDICK CORPORATION
MILTON, WISCONSIN
Bronch Offices: New York • Chicago • Atlanta • Los Angeles
Dealers in all principal cities

KAY SURGICAL, INC.
1144 Madison Ave. Memphis, Tenn



In Sprains, Strains and Muscle Spasm, 'Soma' Compound

numbs the pain...not the patient

A potent analgesic and a superior muscle relaxant

1. A sprain or fracture is not a big clinical problem—but it does hurt. And if there is housework to do and kids to mind, the patient needs something to numb the pain.

2. A.P.C. compounds have limited usefulness; and the patient can buy them without your prescription. Unfortunately, most of them are too mild to be effective for sprains—and more potent products too often make the patient feel 'dopey'.

3. 'Soma' Compound is ideal in these cases. Since it contains both 'Soma' (carisoprodol) and acetophenetidin it is both a potent analgesic and a superior muscle relaxant; it also contains caffeine to offset any drowsiness *("numbs the pain...not the patient")*.

4. Why not try 'Soma' Compound? Dosage is 1 or 2 tablets q.i.d. For more severe pain, try 'Soma' Compound + Codeine. Dosage: 1 or 2 tablets q.i.d.

5. Hypersensitivity to carisoprodol may occur rarely. Codeine may produce addiction, nausea, vomiting, constipation or miosis.

Soma® Compound

carisoprodol 200 mg., acetophenetidin 160 mg., caffeine 32 mg.

Soma® Compound + Codeine

carisoprodol 200 mg., acetophenetidin 160 mg., caffeine 32 mg., codeine phosphate 16 mg. (Warning—may be habit forming.)

® WALLACE LABORATORIES / *Cranbury, N.J.*

CSO-9193



who were the "untreatables"?

From their inception with cortisone, to the present-day variants of the steroid molecule, the corticosteroids have presented a therapeutic paradox. The beneficial action against inflammation and allergy as well as several undesirable metabolic effects are all, apparently, the results of the same basic physiologic action.[1]

Some of these associated metabolic reactions made it risky or otherwise undesirable to treat with steroids large numbers of patients in various categories who would otherwise have benefited from such management. These "untreatables" were overweight, had cardiac disease, hypertension, or pulmonary fibrosis associated with congestive heart failure. Also in this category were those patients whose emotional symptoms were aggravated by earlier steroids.

But the advent of ARISTOCORT® Triamcinolone in 1958—the result of biochemical and pharmacologic research which successfully stripped away many important undesirable hormonal effects from the primary anti-inflammatory action—dramatically changed this picture. This steroid did not overstimulate the appetite, or cause the excessive weight gain induced by other steroids;[2-7] it proved to have one of the best records of any steroid for *not* causing edema, or salt-and-water retention;[2,3,7-10] and the incidence of undesirable euphoria with this agent was remarkably low.[2,4,5,9,10] What is most significant is that these benefits have stood the test of more than 5 years of widespread use. And, of course, the avoidance of these distressing hormonal effects benefited *all* patients requiring steroids, not just those in the special categories, as demonstrated by wide clinical use.

Side Effects. Since it may, under some circumstances, produce any of the unwanted effects common to all cortisone-like drugs, discrimination should always be exercised in administering ARISTOCORT® Triamcinolone. Any of the Cushingoid effects are possible, as are purpura, G.I. ulceration, increased intracranial pressure and subcapsular cataract. Corticosteroids generally may mask outward signs of bacterial or viral infections. Catabolic effects to watch for include muscle weakness and osteoporosis. Weight loss may occur early in treatment but is usually self-limiting.

Contraindications. While the only absolute contraindications are tuberculosis and herpes simplex, there are some relative contraindications (peptic ulcer, glomerulonephritis, myasthenia gravis, osteoporosis, fresh intestinal anastomoses, diverticulitis, thrombophlebitis, psychic disturbance, pregnancy, infection) to weigh against expected benefits.

While no steroid can *cure* a susceptible disorder, many patients who would otherwise be confined in a state of invalidism have, on ARISTOCORT® Triamcinolone, been able to pursue active, useful lives.

References: 1. Levine, R.: Rationale for the Use of Adrenal Steroids, Paper presented at Annual Convention, Medical Society of the State of New York, New York, May 13-17, 1963. 2. Hollander, J. L.: Clinical Use of Dexamethasone. *JAMA 172*:306 (Jan. 23) 1960. 3. Boland, E. W.: Chemically Modified Adrenocortical Steroids. *JAMA 174*:835 (Oct. 15) 1960. 4. McGavack, T. H.: The Newer Synthetic Adrenocortical Steroids in Therapy. *Nebraska Med. J. 44*:377 (Aug.) 1959. 5. Freyherg, R. H.: Berntsen, C. A., Jr., and Hellman, L.: Further Experiences with Δ1, 9 Alpha Fluoro, 16 Alpha Hydroxyhydrocortisone (Triamcinolone) in Treatment of Patients with Rheumatoid Arthritis. *Arthritis Rheum. 1*:215 (June) 1958. 6. Cahn, M. M. and Levy, E. J.: Triamcinolone in the Treatment of Dermatoses. *Amer. Practit. 10*:993 (June) 1959. 7. AMA Council on Drugs: New and Nonofficial Drugs. *JAMA 169*:255 (Jan. 17) 1959. 8. McGavack, T. H.; Kao, K.-Y. T.; Leake, D. A.; Bauer, H. G., and Berger, H. E.: Clinical Experiences with Triamcinolone in Elderly Men. *Amer. J. Med. Sci. 236*:720 (Dec.) 1958. 9. Fernandez-Herlihy, L.: III. Use and Ahuse of Corticosteroid Therapy—The Structure and Biologic Activity of the Corticosteroid Hormones and ACTH, *Med. Clin. N. Amer. 44*:509 (Mar.) 1960. 10. McGavack, T. H.: Triamcinolone: A Potent Anti-inflammatory Sodium Excreting Adrenosteroid. *Clin. Med. 6*:997 (June) 1959.

maximum steroid benefit—minimum steroid penalty

Aristocort®
Triamcinolone
1 mg., 2 mg. or 4 mg. tablets

Lederle LEDERLE LABORATORIES • A Division of AMERICAN CYANAMID COMPANY, Pearl River, New York
229-3

CITY VIEW SANITARIUM

For the diagnosis and treatment of nervous and mental disorders, and addictions to alcohol and drugs.

Established 1907

JOHN W. STEVENS, M.D.

Founder

NASHVILLE, TENNESSEE

Remember, Doctor—

It's been

Tafel Surgical Supply Co., Inc.

SINCE 1889

for

Drugs, Orthopedic, Surgical

Supplies & Equipment

1203 Church Street

Nashville, Tennessee

Murfreesboro—Vacancies

STAFF PHYSICIANS for 1275 bed neuropsychiatric hospital, including 350 general medical and geriatric. Modern facilities for diagnosis and treatment of mental illness. Salary $11,150 to $18,405 depending on qualifications; fringe benefits; cost of moving to Murfreesboro will be paid by Veterans Administration; visit here for evaluation can be arranged at our expense. Excellent educational opportunities for students in this area. Contact—Director, Veterans Administration Hospital, Murfreesboro, Tennessee.

cut Rx writing by 2/3 in colds, flu or grippe

NAME _____

ADDRESS _____

℞

No need to write three separate prescriptions for antitussive, decongestant and analgesic relief of common cold, flu or grippe symptoms when it is therapeutically correct... economically sound... to specify

ANTITUSSIVE/DECONGESTANT/ANALGESIC
'EMPRAZIL-C'® TABLETS

Each tablet contains:

Codeine Phosphate*	15 mg.
'Sudafed'® brand Pseudoephedrine Hydrochloride	20 mg.
'Perazil'® brand Chlorcyclizine Hydrochloride	15 mg.
Phenacetin	150 mg.
Aspirin	200 mg.
Caffeine	30 mg.

*Warning – may be habit forming

'Emprazil-C' Tablets are available on prescription only.

Dosage: Adults and children over 12 years – 1 or 2 tablets – 3 times daily as required. Children 6 to 12 years – 1 tablet – 3 times daily as required. **Caution:** While pseudoephedrine is virtually without pressor effect in normotensive patients, it should be used with caution in hypertension. Also, while chlorcyclizine has a low incidence of antihistaminic drowsiness, the usual precautions should be observed. **Supplied:** Bottles of 100 tablets.

Also available without codeine as 'EMPRAZIL'® TABLETS

Complete literature available on request from Professional Services Dept. PML.

BURROUGHS WELLCOME & CO (U.S.A.) INC.

Tuckahoe, N. Y.



Empty capsules are filled by the finest precision machinery available . . . but no machine is perfect. That's why all Lilly Pulvules® (filled capsules) are given the "thirty-minute checkup" to be certain that uniformity is maintained. At least once every thirty minutes ten filled capsules are taken from each machine and carefully weighed on a prescription balance. In addition, the checks are double-checked at least four times each day . . . another of the many stringent controls which assure you that the Lilly products you prescribe provide quality that merits the full measure of your confidence.

Eli Lilly and Company • Indianapolis 6, Indiana, U.S.A.

Lilly

300680

Journal of the Tennessee Medical Association

OWNED AND PUBLISHED BY THE ASSOCIATION

Volume 57 JANUARY, 1964 Number 1

The Role of the Community Clinic in Care of the Psychotic Patient

ANDREW S. WACHTEL, M.D., Oak Ridge, Tenn.

Mental health clinics with their effectiveness enhanced by the psychodynamic drugs will, without doubt, return to, or keep in the community the patients with the milder forms of psychosis and psychotic behavior. The family doctor will perforce become more adept in the field of psychiatry.

Since the report of the Joint Commission on Mental Health Illness and Health in 1961, there has been a strong emphasis on community based solutions of mental health problems. The focus of this report is on the major mental illnesses; "The intensive treatment of patients with critical and prolonged mental breakdowns should have first call on fully trained members of the mental health professions." Community mental health clinics serving both children and adults are our main line of defense in reducing the need of many persons with major mental illness for prolonged or repeated hospitalization."[1] Inherent in this concept is a responsibility for the care of the psychotic patient at the community level. The recent message of the President to Congress has further amplified and expanded this concept to include more comprehensive community mental health centers above and beyond the out-patient clinic.[2]

Are these approaches to the major mental health problem of our time feasible for the community clinic? Many have expressed the feeling that the out-patient clinic must limit its responsibility to those who are good psychotherapeutic candidates. In general this would include situational reactions, the neurotic, and certain characterological problems. The tradition of the psychiatric clinic has evolved with an increasing emphasis on intensive psychotherapy as the principal modality of treatment. With many seriously ill patients this may not provide the optimum program of treatment.

It might be of value to review briefly the history of the mental health clinic as this instrument has developed. The first clinics for mental patients were established in 1885 at the Pennsylvania General Hospital and some years later at the Boston Dispensary. "Team" approaches to treatment as currently utilized were not known in these early clinics which were almost entirely focused on a medical therapist base. In 1909, traveling clinics were begun in New York State and similar clinics in Massachusetts the following year. These clinics were operated in connection with mental hospitals and were in the main, diagnostic. In addition, clinics developing at the Henry Phipps Psychiatric Clinic at John Hopkins and the Boston Psychopathic Hospital utilized social work and were charged with the responsibility for follow-up care. After this early period with major responsibility for service to fairly disturbed patients, predominantly adult, the growth of clinics occurred primarily in the frame-work of child guidance with the Chicago Psychopathic Institute, the Judge Baker Guidance Center, and others.[3] During the period following, until World War II the major emphasis and growth in clinics was in those for children.

*Presented at the meeting of the Tennessee Psychiatric Association and the Tennessee District Branch of the American Psychiatric Association, Knoxville, Tenn., April 9, 1963.

The theoretical basis for treatment was largely an analytic orientation with play therapy and increasing involvement of the family in treatment programs. With World War II the importance of emergent treatment for adults and subsequent follow-up care through the mental health clinics was increasingly recognzied. More recent developments in Europe with particular emphasis on Dr. Querido's program in Amsterdam have shown the effectiveness of early out-patient care and follow-up supportive care in the treatment of the severely ill patient.[4] At times associated with clinic development and at other times associated with hospital programs has been noted the development of the Day Care Center as a further alternative to hospitalization in many instances, and a useful tool in the rehabilitation of the hospitalized patients.

In a recent book, "Administration in Psychiatry" by Dr. Walter E. Barton, present Medical Director of the American Psychiatric Association and recent Past President of the Association, there is expressed a concept of the dual system of the treatment continuing for the emotionally ill. While painful, we cannot avoid both the implicit and explicit criticism raised by Dr. Barton in his statements regarding the out-patient clinic program. "Seldom does one hear the first treatment system berated for its failure to meet 'pressing community demands' for help. There are long waits for service. It does not usually treat major mental illness. It refuses to treat the alcoholic. It rejects the aged patient."[5] That there is some valid basis for this is shown in the recent report by Doctors Brill and Storrow from UCLA Medical Center in which they state that those patients who "stimulated" a positive reaction in the doctor tended to be accepted for treatment more often than others. These well motivated patients were more likely to be diagnosed as having psychoneurotic reactions, while the more poorly motivated persons were more likely to be diagnosed as having personality disorders and psychoses. They state further that there is a possibility that physicians may tend to avoid the psychotic who withdraws from reality.[6] Thus, it would appear both from the viewpoint of history and tradition and current thinking that there remains considerable question as to the effective role that the out-patient clinic can play in the treatment program of the seriously ill patient.

In considering the role of the community clinic in the care of the psychotic patient, I would like to think in terms of clinic function in: prehospital care, day hospital care, in-patient care, and after-care and rehabilitation. Obviously the involvement of the individual clinic in any one of these areas will vary in relationship to both community need and other community resources. The clinic, remote from major medical facilities and mental hospitals, has a differing responsibility and function than the clinic serving a community which has all of these facilities.

Prehospital care may appropriately include not only the areas of early treatment and secondary prevention but also community education both in conditions which are important to the maintenance of mental health and emotional security, but also in acceptance of the emotionally ill. Frequently the need for hospitalization is more a social need than a psychiatric need. Thus, the ability of the community to tolerate differences in behavior and accept these is of prime significance in the question of decisions for hospitalization. Secondary prevention with early recognition of illness is dependent upon the clinic's availability to the individual under stress and often times on the clinic's availability to the local physician and minister. Parenthetically, it might be said that such availability of consultation is more workable where a relationship with medical colleagues in the community is firmly established by the medical staff of the clinic. We cannot always refer our medical colleagues to the Social Work staff, however inconvenient it may be to deal with them ourselves. Intervention of crisis does not allow for prolonged delay in critical circumstances. If one attempts to deal with the psychotic patient early, flexible admission is mandatory. The degree to which one is able to deal with the acute psychotic may also be dependent on the willingness to be therapeutically flexible. Utilization of medication, utilization of somatic therapy (as was done by Dr. Winston in Johnson City)

may often make possible subsequent psychotherapeutic intervention.[7]

In order to effectively manage these acute problems, one must have available either as an extension of clinic function or by close collaboration with the local in-patient facility, in-patient beds for patients who do not respond or who represent serious threats to themselves or others. The suicidal patient and the disturbed paranoid schizophrenic can rarely be treated effectively without adequate hospital facilties. Here perhaps the major role of the clinic is to make possible the early treatment of such patients and to expedite their hospitalization both by making decisions and supporting nonpsychiatric colleagues in such decisions. The advisability of home visits to the patient during periods of acute disturbance should be considered. Our European colleagues have been highly successful in caring for seriously ill patients with the availability of such direct service. Frequently, it is necessary to include various members of the family in an adequate treatment program and the clinic staff is well designed for this. It may at times also be useful to deal with employers, friends, and others important in the patient's environment.

While day hospital centers have developed under varying auspices from mental hospital sponsored centers, to primary treatment centers, to general hospital psychiatric service, it seems that the day hospital can fit well within the program of a community clinic. The orientation of the day hospital is strongly directed toward the maintenance of the patient's direct relationship with the home environment and is properly located within the immediate community. The use of the day hospital as a post-hospital service is widely recognized. I would like to emphasize the significance of the day hospital program as part of a comprehensive clinic program. On the basis of the experience of others, it appears likely that a significant number of patients who would otherwise require in-patient care can be dealt with by day hospital facilities and often more effectively thereby in-patient treatment. Figures given vary from 10 to 60% as to the number of patients who would otherwise require in-patient care who may be cared for in a day hospital. The numerical difference appears to be related to the circumstances in which the day hospital functions. Where it functions as an extension of an in-patient service, the number of patients referred to the in-patient service frequently are greater. On the other hand, where it is a part of an out-patient program the tendency to maintain the patient in the day center is enhanced. It would appear that to the extent that the patient can be treated within his environment with continuing relationships in the family, his long term treatment is more likely to be effective. Greenblatt[8] has recently stated that "Day care personnel are able to handle cases referred from the community that are indistinguishable in type from those originally admitted to the in-patient service."

Does the community clinic have a function in the in-patient care of the psychotic patient? Here we may have many differences of opinion both from the viewpoint of the hospital staff who may misunderstand and resent interference in management, or of clinic staff who feel too busy to add this additional responsibility to their present case load. It seems to me that the English have done better. The involvement of the psychiatrist in both in- and out-patient care with responsibility for his own patients before, after, and during hospitalization makes a good deal of sense.[9] That the clinic can be effective both in making the transition from community to hospital and the return to the community by varying means has been shown in this state by the program of Drs.' Moore and Griffith[10] at Clarksville and Central State Hospital. I believe this can be done without interference in the proper authority of the hospital physician for his patient and that it may result both in improvement of patient care and relationship between clinic and hospital staff. The way we can best accomplish this, whether by attendance at staff meetings concerning our patients, or by rounds involving those patients from our community, is dependent upon the organization of both the clinic and the hospital. In the Clarinda Type Hospital where the patient group is geographically divided, a close relationship between the respective staffs can be of great help.[11]

Post-hospital care has been shown to be of major benefit in diminishing the probabil-

ity of return to the hospital. Many patients find it easy to discontinue medication where there is no continuing support either from a member of the hospital staff or from the community clinic. Frequently the return to family and work results in a period of transition during which the hazard of decompensation is marked. A continuing relationship during this period may be highly important in maintaining the patient in the community without recurrence of illness. Studies of follow-up care which have included medication and varying intensities of patient-therapist contact have indicated marked decrease in hospital return rates in those patients who have been followed. Where feasible this may be accomplished by the hospital staff. Many times, however, both the availability of staff and the factors of distance and accessibility makes such follow-up both impracticable and unlikely without the involvement of the local clinic.

Summary

Historically the out-patient clinic began as a mode of case finding and follow-up care for the acutely disturbed patients. After this initial beginning the clinic movement was largely concerned for many years with intensive psychotherapy and the team approach to care of children. While this added a great deal in the depth of our psychotherapeutic endeavers, it did tend to focus these largely on intensive psychotherapy with the loss in terms of other modalities. During and following World War II the importance of out-patient care for early recognition of emotional disturbances and treatment of acute illnesses has been increasingly evident. Ways in which the community clinic can be useful in the pre-hospital care of the psychotic patient have been reviewed. In addition we have suggested exploration in the collaboration of the out-patient clinic in the care of mental hospital in-patients. Alternatives for post-hospital care have been suggested, among them the continuation of follow-up care by the mental hospital itself, day care facilities and the early inclusion of the out-patient clinic in the follow-up program.

References

1. Action for Mental Health, Basic Books, 1961.
2. Kennedy, J. F.: Mental Illness and Mental Retardation, Message to 88th Congress, 1st Session House of Representative, Document No. 58, Feb. 5, 1963.
3. Barhash, A. Z., Bentley, Mary C., Kirkpatrick, Milton E., Sanders, Helen A.: Community Psychiatric Clinic (the organization and function of), National Institutes of Mental Health, 1952.
4. Querido, A.: Early Diagnosis and Treatment Service, J.A.M.A. 162, 854, 1956.
5. Barton, W. E.: Administration in Psychiatry, Springfield, Ill., Charles C. Thomas, 1962.
6. Brill, N. G. and Storrow, H. A.: Prognostic Factors in Psychotherapy, J.A.M.A. 183:913, 1963.
7. Winston, Nat: Personal Communication.
8. Greenblatt, M.: Introduction to Day Hospital, New York Grune & Stratton, 1962.
9. MacMillin, D.: U. S. Public Health Service Publications No. 771, 1956.
10. Griffith, John: Personal Communication.
11. Garcia, L. B.: The Clarinda Plan, Mental Hospitals, 11:30, 1960.

Industry Jobs: The number of persons working in the health care field increased by 46% between 1950 and 1960, a Health Insurance Institute analysis showed. The 1950 total was 1.3 million, while the 1960 total was 1.9 million. Largest increases were in the categories of hospital and other institutional attendants, up from 199,440 to 391,136, and in medical and dental technicians, up 77.1%. (*AMA News, Nov.* 25, 1963.)

The authors consider the control of this lesion merely conization of the cervix.

Conservative Management of Pre-Invasive Cancer of the Cervix and Its Relationship to Pregnancy

SAMUEL S. LAMBETH, M.D., and ELGIN P. KINTNER, M.D., Maryville, Tenn.

Physicians may be confronted with several difficult problems in the management of patients whose diagnosis is pre-invasive carcinoma of the cervix. Some of these are listed as follows: (1) criteria and technic for accurate diagnosis; (2) extent of treatment necessary for complete elimination of diseased tissue; and (3) relationship of pre-invasive cancer of the cervix to pregnancy.

The generally accepted treatment for pre-invasive carcinoma of the cervix is total hysterectomy and removal of a 2 centimeter cuff of vagina. For the young woman who has not completed her family this may seem quite radical. The purpose of this report is the presentation and discussion of 3 patients in whom more conservative treatment, namely cold conization, adequately removed all the diseased tissue. Since her treatment, one of these patients has had an uneventful delivery of a normal infant.

From the Departments of Gynecology and Pathology, Blount Memorial Hospital, Maryville, Tenn.

Case Reports

Case 1 (No. 49829). This 31 year old, white, married woman was seen in the office on Oct. 7, 1957, with the chief complaint of leukorrhea of 3 months' duration. The patient and her husband had only one child and wished to enlarge their family.

The examination was normal except for the cervix which was moderately eroded. Cytology studies were positive for malignant cells. Uterine curettement and cold conization of the cervix were performed on Nov. 1, 1957. The preoperative cellular studies and findings at conization were interpreted as carcinoma in situ. (Fig. 1.)

At subsequent office visits it was found that slight leukorrhea continued. At all of the check-up examinations the cervical smears remained negative for malignant cells. A second conization in June, 1959, did not reveal evidence of malignancy. She was last seen in March 1960, at which time

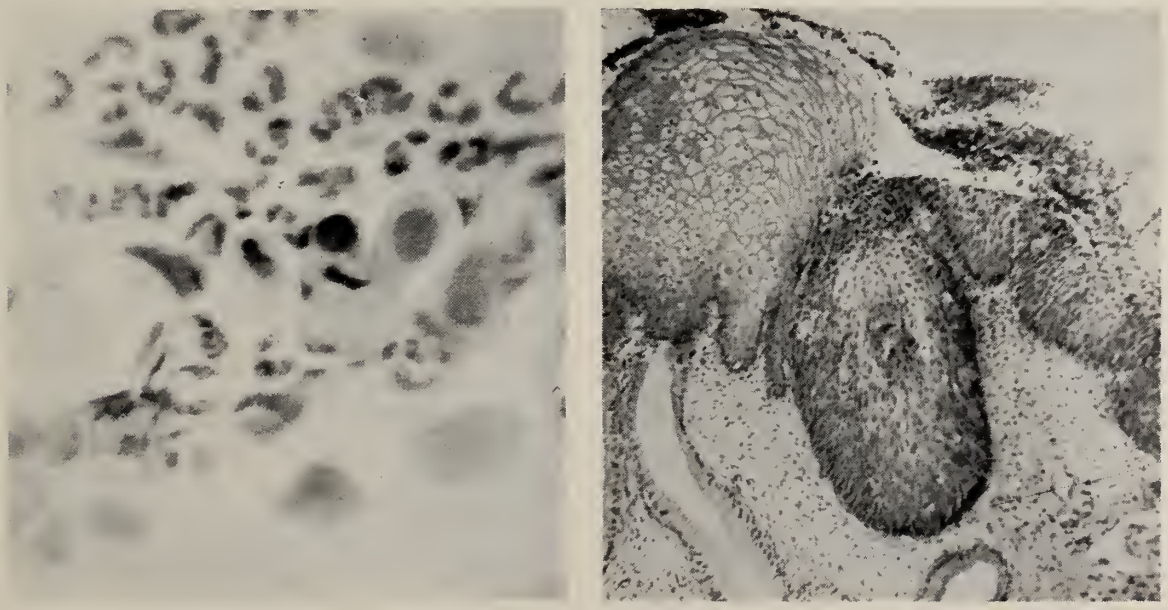


FIG. 1. (a) Cytology smear. (b) There is an abrupt transition between the normal squamous epithelium on the left and the carcinoma in situ on the right.

cytology studies were negative. Since then she has moved to another city and has been followed regularly by a gynecologist. No evidence of cervical malignancy has developed.

Case 2 (No. 67356). A 24 year old, white married woman was seen in the office on Sept. 8, 1959, because of increased frequency of menstrual periods of 4 months' duration. The past history was significant in that the patient had only one living child.

The general examination was normal except for obesity. Pelvic examination revealed an eroded and chronically inflamed cervix. The cytology showed some "abnormal cells."

Because of the patient's symptoms, physical findings, and abnormal cervical cytology, uterine curettement and cold conization of the cervix were performed on Sept. 16. The cervical cytologic and conization findings were interpreted as carcinoma in situ of the cervix. (Fig. 2.)

Following the conization the patient did well until Jan., 1960, when she had a heavier menstrual period. Examination revealed an eroded cervix. A second cold conization and cervical cytologic studies were done on Feb. 13. No evidence of malignancy was found. Cytology studies were again negative in Dec., 1960, and July, 1961.

There were no further pelvic complaints until Dec., 1961, when the patient had a spontaneous abortion. At that time cytology studies, cervical biopsies, and uterine curettement did not reveal evidence of dysplasia or pre-invasive cancer.

The patient became pregnant again in July, 1962; there were no serious complications. She was delivered uneventfully of a normal 8 lb. female infant on April 10, 1963. The postpartum course was not remarkable. Cytology studies of the cervix at the 6 weeks check-up were negative for malignant cells.

Case 3 (No. 96153). This 31 year old, white married woman was seen in the office on Oct. 4, 1961, complaining of soreness in the lower abdomen and vaginal discharge. The last menstrual period occurred on July 14, and lasted 4 days.

The positive findings were enlargement of the uterus and a slightly eroded cervix. Cytology studies suggested malignancy. On Oct. 9, a cold knife conization of the cervix was done. The cytology studies and the conization findings were interpreted as carcinoma in situ. (Fig. 3.)

The patient had no complications following the operation. A cervical smear during the 5th month of pregnancy was negative. She had a short labor and spontaneous delivery of a normal, 7 lb., 11 oz. male infant on April 20, 1962. The postpartum course was uneventful. Cytology study on June 8, 1962, was normal.

This patient continued to have a sense of pressure in the pelvis due to prolapse of the uterus. Because of this complaint and because she had a healthy family of 6 children, vaginal hysterectomy and perineorrhaphy were performed on Aug. 28, 1962. No evidence of residual carcinoma was found in the cervix.

Discussion

Pre-invasive carcinoma of the cervix is a microscopic diagnosis which rests upon the study by the pathologist. For accuracy a number of sections may be necessary, and in some instances consultation with several authorities is advisable. When there are differences of opinion, they are in regard to the extent of the atypicalities rather than their presence or absence. Premalignant dysplasia exhibits the same type of cellular atypicalities as carcinoma in situ. The exact diagnosis depends on the extent of involvement within the squamous layer at a given point. As one moves from a

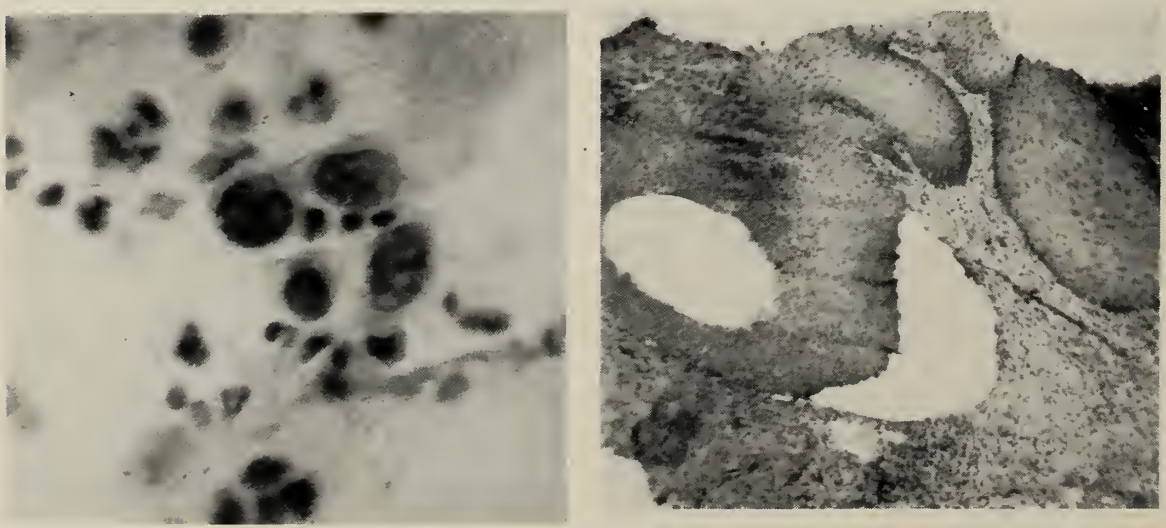


FIG. 2. (a) Cytology smear. (b) Cellular atypicalities extend the full depth of the squamous layer on the left.

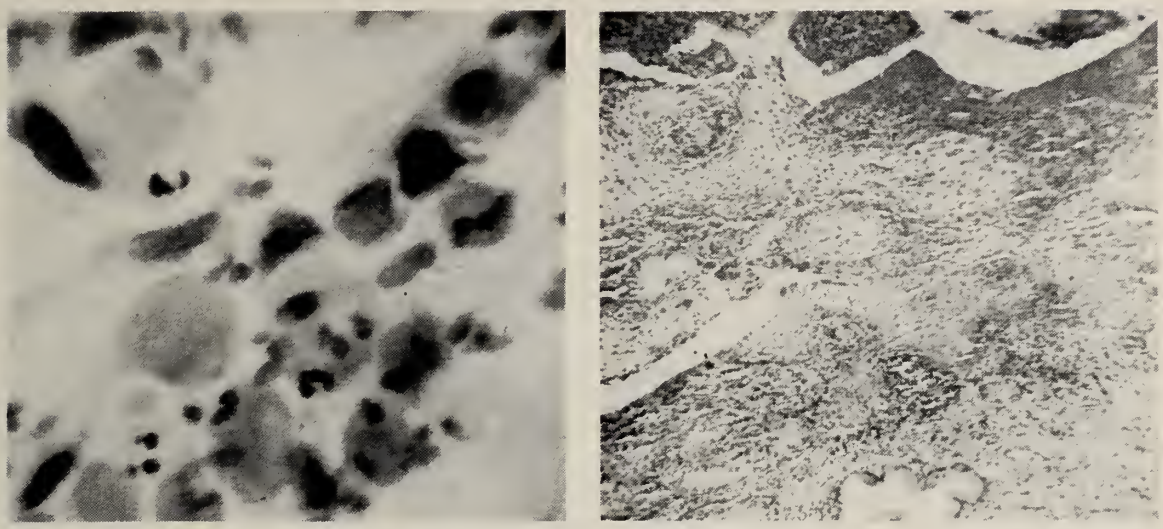


FIG. 3. (a) Cervical smear. (b) Changes of carcinoma in situ extend along the endocervical surface and adjacent endocervical glands.

normal epithelium to dysplasia, and then to pre-invasive carcinoma, there is often a transition of one to the other. The problem then consists of the pathologist asking himself, "Do the atypicalities involve the entire squamous layer or are they only scattered." Premalignant changes at one point are frequently associated with pre-invasive carcinoma in an adjacent area which may not have been sectioned.

The patient in Case 1 illustrates the importance of repeated study of tissues when any doubt about the diagnosis exists. Consultation was obtained. A conservative attitude was assumed. Subsequent studies did not reveal any further evidence of carcinoma in situ.

We believe the best technic for making an accurate diagnosis of the cervical tissue is usually a cold knife conization with the scalpel. In some instances the Spencer Trachelotome (V. Mueller Co.) has been useful in obtaining a smooth cone which includes endocervical tissue. Care must be used that epithelial cells are not wiped off the cervix by vigorous preparation with gauze sponges. Although it is necessary to obtain representative tissue from the endocervix, it is equally important that a 3 to 5 mm. border of grossly normal appearing squamous epithelium be included. In the presence of ectropion of the cervix it is difficult to position the knife to obtain this cuff of squamous epithelium within the cervical tissue at a single angle. Regardless of the method used, it is important the surgeon be aware that obtaining a satisfactory conization specimen is not always an easy task.

The technic for making the diagnosis of pre-invasive cancer of the cervix has been debated in the literature. Recently Younge[1] has stated that accuracy can be maintained by multiple cervical biopsies and endocervical curettement in the office. Parsons and Sommers[2] believe a cold conization of the cervix is usually necessary for accurate diagnosis. A major consideration in favor of cold knife conization is that it may prove to be adequate treatment for many of these patients. The really important points in the diagnostic studies are to be certain that no foci of invasive carcinoma are missed and, if possible, to remove all the diseased tissue with the conization.

The extent of treatment necessary for complete elimination of the diseased tissue is an intriguing problem and cannot be categorically settled by a single method for all patients. The conservative management of the patient presented in Case 2 certainly had a happy outcome since she has been able to have another baby.

The solution to the problem of the positive cervical smear or questionable malignant change does not consist of insisting upon a "black or white" diagnosis for or against carcinoma in situ. The best answer is a conservative approach when there is a desire or reason to keep the uterus, and more radical treatment when conization

does not remove all diseased tissue or when there are other indications for hysterectomy. This principle of treatment may be used for dysplasia or true pre-invasive cancer. With this line of reasoning, the importance of cytologic findings takes on an added meaning, because atypical cells are the criterion for conization as a method of treatment as well as diagnosis of cervical disease. The lesson for the practicing physician is that the diagnosis of dysplasia or pre-invasive carcinoma does not constitute an emergency situation.

It is a common observation that often hysterectomy for pre-invasive carcinoma of the cervix shows a normal uterus because all the diseased tissue had been removed by the diagnostic conization. Taylor and Walker[3] reported that in their series 40% of the patients with pre-invasive carcinoma of the cervix were cured by conization. Recently Krieger and associates[4] have emphasized the role of conization in the treatment.

In some cases there will be residual dysplasia or carcinoma in situ. The cervical disease may recur at a later date. Therefore, if a conservative course is elected, it is most important that the patient's course be followed with cytology studies every three months for one year, and annually thereafter. We believe it is good practice in some cases to repeat the conization at least once to double check the absence of diseased tissue. The timing of this second procedure must be determined by the patient's symptoms, the gross appearance of the cervix, or the cytologic findings during the months of follow-up after the original studies. The decision of when hysterectomy and when conization should be done must be an individual one. We believe that many younger patients who have not completed their families may safely rely on conization alone if they are followed carefully enough to detect early abnormal changes.

The patient in Case 3 illustrates a satisfactory method of management for one who is found to have pre-invasive carcinoma of the cervix early in pregnancy. It is most important that a cervical smear be done on all pregnant patients at their first visit. Many individuals have not had such an examination for several years prior to their initial prenatal checkup. When suspicious or positive cells are reported, further diagnostic studies must be performed regardless of the stage of the pregnancy. In this group of patients cold knife conization is important to eliminate the possibiltiy of any invasive malignancy. Frequently it accomplishes the removal of all abnormal epithelium. Rubin[5] has emphasized that the risk of abortion or premature labor is minimal compared to the dangers involved in missing an invasive cancer during pregnancy. A subsequent cervical smear three months following the conization will serve as a prognostic guide for the patient's care after delivery. If pre-invasive carcinoma is definitely established, the patient may be carried to term without further treatment. That conization alone may be adequate treatment for this condition is clearly illustrated in Case 3. When hysterectomy was done later for another indication, this patient had no evidence of dysplasia or carcinoma in situ.

Summary and Conclusions

Three patients with pre-invasive carcinoma of the cervix have been presented. Criteria and technic for diagnosis, the extent of therapy necessary, and its presence in pregnancy have been discussed.

Some patients with this condition are apparently cured by conization of the cervix. Thus, diagnosis and treatment are combined in a relatively simple procedure. If hysterectomy is elected, it should be done for other indications than as a measure for cancer prevention. Close cooperation between clinician and pathologist is necessary in deciding upon the best type of therapy.

References

1. Younge, Paul: Premalignant Lesions of the Cervix Clinical Management, Clin. Obst. & Gynec. 5:1137, 1962.

2. Parsons and Sommers: Gynecology. Philadelphia, W. B. Saunders Co. (1962).

3. Taylor, E. Stewart and Walker, Louise C.: Pre-invasive Cancer of Uterine Cervix, Postgrad. Med. 23:105, 1958.

4. Krieger, James S., McCormack, Lawrence J., and Bradley, Vernon F.: Role of Conization in the Detection and Treatment of Cervical Carcinoma in Situ, Am. J. Obst. & Gynec. 86:120, 1963.

5. Rubin, Alan: Management of Benign Lesions of the Cervix During Pregnancy, Ann. New York Acad. Sci. 97:755, 1962.

CASE REPORT

Idiopathic Hemochromatosis Treated by Multiple Phlebotomies Over a Six and One-Half Year Period

Robert B. Gilbertson, M.D., Knoxville, Tenn.

Idiopathic hemochromatosis is a disease of abnormal iron storage associated with abnormal pigmentation of the skin, diabetes mellitus, hepatomegaly, heart disease, and often impotence. Prior to therapy by multiple phlebotomy the disease had a progressive, unrelenting, fatal course.[1] This is a case report of idiopathic hemochromatosis in a white man, in whom diagnosis was established by liver biopsy, and who was treated over six and one-half years by multiple phlebotomies. Most of the signs originally present disappeared, or became markedly reduced with therapy.

Report of Case

The patient, a 45 year old white man, university campus policeman, was first seen on Jan. 15, 1956, when he was admitted to East Tennessee Baptist Hospital as having an acute emergency. He was referred with a tentative diagnosis of coronary thrombosis because he had had a sudden onset of low substernal pain that radiated to his neck and was associated with dyspnea. For several days prior to admission he had experienced some low substernal "soreness" which was not related to exertion or meals. Further detailed history was not obtained at the time of the initial admission, since the patient was thought to have a possible myocardial infarction.

Physical Examination. The B.P. was 120/80, the heart rate 72 and regular, and respiration 20. A peculiar pigmentation of the skin was noted on initial examination, but the patient was examined in artificial light and the significance of this was not readily apparent. There were no signs of distention of the neck veins or other signs of myocardial decompensation. The heart was normal size with normal sinus rhythm, without murmurs. The chest was clear; the abdomen revealed the liver to be enlarged 5 fingers below the right costal margin, but the spleen was not felt initially. No further detailed examination was done at this time.

Laboratory Findings. The complete blood count and urinalysis were revealed normal; the P.C.V. was 40%. The initial EKG., taken shortly after admission, was interpreted as showing left axis deviation with nonspecific T-wave changes, with a flat T-wave in Lead I, AVL, and slightly inverted in VI and flat in V5 and 6. Serial electrocardiograms, done daily for the next 3 days, showed persistent T-wave changes of a nonspecific type, unchanged from the first tracing. No signs compatible with myocardial infarction were noted. No previous electrocardiograms were available for comparison.

Hospital Course. The morning following admission the patient's unusual "dirty brown" skin pigmentation was most prominent when visualized in natural daylight. The pigment was more prominent on exposed regions of the body, especially the face, neck, arms. No abnormal mucosal pigmentation was present. Spider angiomas were noted on the chest and arms. The liver was definitely enlarged and of a firm, smooth, consistency, non-tender, 5 fingers below the right costal margin. The spleen was definitely palpable 2 fingers below the left costal margin. Bilateral testicular atrophy was also noted. A fasting blood sugar was reported the second day of admission as being 149 mg.%, and it was at this point that the diagnosis of possible hemochromatosis was first considered.

Family History. Taken partly from the patient, as well as his brother, revealed that his father died at the age of 76 with some questionable type of heart disease, though the details of this were unknown. The patient's mother died in her 40's with possible tuberculosis. There was no known abnormal pigmentation in any of the siblings, nor was there history of diabetes or coronary disease in the family. He had 4 brothers, all living and well, in their fifties. The patient stated that his friends and family had noted some unusual skin pigmentation approximately 3 to 4 years before this admission, but he did not attach any significance to this observation.

On Detailed System Review: The patient had also noted impotency of 3 years duration, but had never asked medical consultation in this regard. There was no history of blood transfusions, alcohol excess, or other unusual dietary history. He had never taken iron therapy or had any history of anemia or jaundice.

Additional Laboratory Studies on this initial admission, revealed: a glucose tolerance test done after a 3 day high carbohydrate diet: fasting blood sugar was 125 mg., at 1-hour, 227 mg., at 2-hours, 170 mg., at 3-hours 149 mg.%, and 125 mg.% at 4-hours. Cephalin flocculation, BSP. test, as well as total and fractional bilirubin values were normal. Blood Kahn was negative. Urinary sediment stained for evidence of abnormal iron pigment was negative.

Because of the nature of his admitting symptoms, it was thought to be wise to delay an elective liver biopsy for approximately 6 weeks, until it was certain that no acute myocardial injury had occurred. He was sent home from the hospital on a 1500 caloric ADA diet and a tentative diagnosis of idiopathic hemochromatosis.

The patient was subsequently seen in the office in Feb. 17, when another EKG. failed to reveal any significant change over the original one taken on Jan. 16; the minor, but definitely abnormal T-waves persisted. A liver biopsy was recom-

mended at this time to the patient and to the referring physician. I did not see the patient again until he consented to liver biopsy and was admitted to the East Tennessee Baptist Hospital in May. The biopsy revealed histologic findings compatible with hemochromatosis; the microscopic description was as follows, "Sections of liver show large amounts of brown pigment within the parenchymal cells and in Kupffer cells. There is extensive fibrosis and chronic inflammation about the periportal spaces. Specific staining for iron shows the brown pigment to be iron. Pathological diagnosis: Hemochromatosis of the liver." (Fig. 1.)

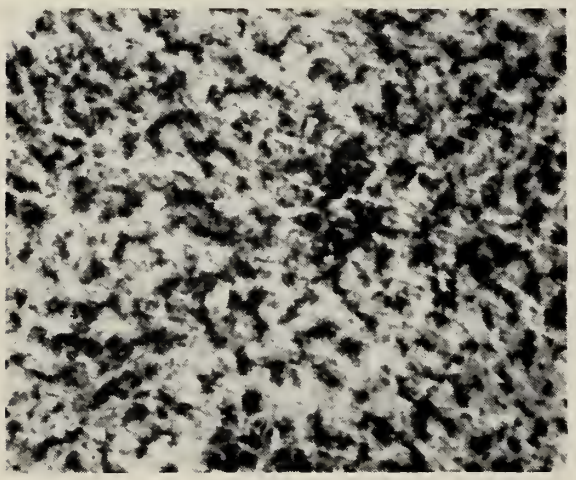


FIG. 1.

Laboratory Studies on the second admission, May 1956, revealed a normal urine, P.C.V. of 44, the WBC. count of 7,700 with a normal differential. Bleeding, clotting time and prothrombin times were normal. S.T.S. was again negative. BSP. test was normal. Cholesterol was 219 mg. and fasting blood sugar was 133 mg. per 100 ml.

Clinical Course. After the histologic diagnosis was established a program of multiple phlebotomies was started. Between June 1956 and June 1957 approximately 12,000 ml. of blood were removed. During this first year the Hgb. never fell below 13 Gm. and the hemocrit remained in the range of 40 to 44 per cent. In Feb. 1957, after 9,000 ml. of blood had been removed, the glucose tolerance test was normal, with a fasting sugar of 100 mg. and a 2 hour blood sugar of 90 mg. The total protein and A/G ratio remained normal throughout the phlebotomy program. The EKG. remained abnormal, with nonspecific T-wave changes and low voltage, as previously noted. Urinary 17-ketosteroids were normal during this first year of treatment, as well as a Thorne test, using ACTH.

In Oct. 1958, after removal of approximately 25,000 ml. of blood, a study of the sternal bone marrow was done. Iron pigment, thought to be in excessive amount, was found in the bone marrow with special iron stains. The liver was thought to be only 4 fingers below the right costal margin, and the spleen was only slightly palpable.

In Jan. 1959, after the removal of approximately 30,000 ml. of blood, the spleen was no longer palpable and the liver was thought to be 3 fingers below the right costal margin, showing progressive reduction in size. A second sternal puncture in July 1959 revealed no evidence of an increase in iron, though some scattered tiny particles of hemosiderin was present in the marrow section.

The patient, from time to time, complained of vague upper gastric distress and occasional sharp shooting pains in the upper abdomen, but without a definite diagnostic pattern to this symptomatology. An upper gastrointestinal x-ray study in August 1958, revealed only hypermotility without other significant abnormality. Liver enlargement was noted on the plain film of the abdomen, but no splenic enlargement was detectable, and no abnormal densities were noted in either the liver or splenic area.

In May 1961, after 39,000 ml. of blood had been removed, the liver and spleen were no longer palpable. EKG. in the spring of 1961 revealed a normal voltage and upright T-waves in all leads, with persistent left axis deviation. This was a definite change over the previous tracings dating from 1956. The patient had no symptoms in the six and one-half year period to suggest coronary disease.

The phlebotomy program has been continued until a total of 52,000 ml. of blood have been removed, as of August 1962, or equivalent to approximately 26 Gm. of elemental iron. Physical examination at this time revealed a marked reduction in his abnormal pigmentation, particularly of his face and neck. The B.P. was 100/70. Spider angiomas persisted on the chest and arms. Testicular atrophy persisted, but liver and spleen were not palpable. The heart was normal to examination. Sigmoidoscopy was negative. X-ray films of the chest revealed normal heart size without parenchymal abnormality. The blood count was normal with a hemocrit of 42 and Hgb. of 13.5 Gm.

The patient continues to work as a campus policeman, and his only complaint at this time is persistent impotence. He has shown a gain of 12 pounds since he was first seen in 1956, and says that his energy and sense of well-being are normal, although he still admits to some ease of fatigue. (It is interesting to speculate whether the return of the electrocardiogram to normal over a period of approximately 4 years was a result of mobilization of the excessive iron pigment from the myocardium.) At the present time there is no evidence of organic heart disease in this patient.

The phlebotomy program is being continued at approximately 2 week intervals, and will be continued until significant anemia develops and objective evidence of depletion of iron pigment in the liver is verified by another biopsy.

Discussion

Idiopathic hemochromatosis was first de-

scribed by Trousseau in 1865.[1] In 1935, Sheldon's[1] classic review of the world's literature revealed 311 cases which he accepted as compatible with this diagnosis. Prior to the insulin era, death usually occurred within 12 months from the onset of the diabetes. Since 1935 the average life expectancy for patients, once signs of clinical hemochromatosis became apparent, was approximately 4.4 years, though some survived 10 to 20 years.[2] From 1935 until 1942, when Balfour and associates[3] attempted treatment in a case of hemochromatosis by multiple phlebotomies, the disease was an interesting clinical triad of abnormal pigmentation, hepatosplenomegaly, and diabetes but without a rational therapy that could halt the progressive course of the disease.

The first patient treated by multiple phlebotomy unfortunately died as a result of hepatoma during the course of treatment.[3] In 1947, Finch and collaborators[4] demonstrated the phlebotomy technic to offer an excellent method of mobilizing excessive tissue iron stores in hemochromatosis by weekly bleedings in a patient whose course was followed over a two and a half year period. It is known that the average amount of iron present in a patient with symptomatic hemochromatosis is approximately 25 Gm.; 500 ml. of blood contains approximately 250 mg. of iron.[5] Therefore weekly phlebotomies over about a 2 year period will mobilize approximately 25 Gm. of iron. The major problem with the multiple phlebotomy technic is cooperation by the patient in a program that requires regular follow-up. (In the case presented, lapses of 6 to 8 weeks was not uncommon between phlebotomies, since the patient was essentially asymptomatic and he found it difficult to understand the need for repeated phlebotomies.) Approximately 10 years has elapsed since widespread use of phlebotomy has been practiced, but it is already apparent that even in cases of heart failure from hemochromatosis, shown by Grosberg's[6] case, a vigorous phlebotomy program has been shown to be effective in prolonging life. Numerous articles attest to the reduction in the size of the liver, reduction in skin pigmentation, amelioration of the diabetes mellitus and general improvement in sense of well being following removal of excessive iron stores.[2,7-10] Impotence has not been affected by phlebotomy therapy.

Once a diagnosis of idiopathic hemochromatosis has been made clinically and confirmed by liver biopsy, weekly phlebotomy of 500 ml. is recommended. In the rare event that liver biopsy is contraindicated or the patient refuses such a diagnostic procedure, Finch and associates[4] have demonstrated that seven weekly phlebotomies of 500 ml. each, will lower the hematocrit in normal individuals to a range of approximately 33% or less. This does not occur in patients with proven hemochromatosis with elevated iron stores. Once a phlebotomy program has been instituted, it should be continued weekly until mild hypochromic anemia develops associated usually with a fall in plasma iron, though the latter finding is not a necessary procedure in following treatment in these cases. Once mild anemia develops, the frequency of phlebotomy should be reduced to once every 2 to 3 weeks, as determined by regeneration of hemoglobin. At this point in treatment a second liver biopsy should be done to assess the remaining iron stores in the liver, since it has been demonstrated that even in cases of anemia produced by multiple phlebotomy, excessive iron stores often persist in the liver and cannot be reduced without further phlebotomies. It has been suggested by Crosby[11] that a more vigorous phlebotomy program be considered in the treatment of hemochromatosis. He removed 55,000 ml. of blood in 11 months from a 48 year old man without apparent complications except for transient hypoproteinemia, corrected with salt poor human albumin early in the course of the vigorous phlebotomy program.

In the future, new chelating compounds may become the treatment of choice for removing excessive iron stores, but at the present these methods have not proven adequate and should not replace proven phlebotomy therapy now recommended and and shown to be of unmistakable value.

Summary

A case of idiopathic hemochromatosis, proven by liver biopsy and treated by mul-

tiple phlebotomies over approximately a six and one-half year period, has been presented. The initial marked skin pigmentation has been reduced, the glucose tolerance test has returned to normal, the hepatosplenomegaly has disappeared, and the electrocardiogram is now normal. The impotence persists as the patient's major symptom. A brief historical review of treatment by phlebotomy has been presented.

References

1. Sheldon, T. H.: Hemochromatosis. London, Oxford Press, 1935.

2. Finch, S. C. and Finch, C. H.: Idiopathic Hemochromatosis, An Iron Storage Disease, Medicine 34:381, 1955.

3. Balfour, W. M., Hahn, P. F., Bale, W. F., Pommerenke, W. T. and Whipple, G. H.: Radioactive Iron Absorption in Clinical Conditions; Normal, Pregnancy, Anemia and Hemochromatosis, J. Exper. Med. 76:15, 1942.

4. Finch, S., Haskins, D. M. and Finch, C. A.: Iron Metabolism. Hemotopoiesis Following Phlebotomy. Iron as a Limiting Factor, J. Clin. Invest. 29:1073, 1950.

5. Finch, C. A., Hegsted, M., Kinney, T. D., Thomas, E. D., Rath, C. E., Haskins, D., Finch, S. and Fluharty, R. G.: Iron Metabolism, Blood 5: 983, 1950.

6. Grosberg, S. J.: Hemochromatosis and Heart Failure; Presentation of Case With Survival After 3 Years Treatment by Repeated Venisection. Ann. Int. Med. 54:550, 1961.

7. Davis, W. D. and Arrowsmith, W. R.: The Effect of Repeated Phlebotomies in Hemochromatosis; Report of 3 Cases, J. Lab. & Clin. Med. 39:526, 1952.

8. Ley, A. B.: The Management of Hemochromatosis, M. Clin. North America 44:789, 1960.

9. Dines, D. E., Anthony, C. W. and Bell, R. F.: Idiopathic Hemochromatosis, J.A.M.A. 173:1841, 1960.

10. Warthin, T. A., Peterson, E. W. and Barr, J. H.: The Treatment of Idiopathic Hemochromatosis by Repeated Phlebotomy, Ann. Int. Med. 38:1066, 1953.

11. Crosby, W. H.: Treatment of Hemochromatosis by Energetic Phlebotomy; One Patient's Response to the Letting of 55 Liters of Blood in 11 Months, Brit. J. Haemat. 4:82, 1958.

Diarrhea of Travelers to Mexico. Summary of a Five-Year Study—B. H. Kean. Ann. Intern. Med. 59:605 (Nov.), 1963.

A series of experiments were designed to elucidate the nature of *Turista* (the diarrhea of travelers to Mexico). The syndrome is a definite clinical entity characterized by acute nonbloody diarrhea, slight fever, abdominal pain, nausea, chills, and malaise. It occurs in one-quarter to one-third of visitors to Mexico, more often in young people than in old, and usually develops several days after arrival. The illness lasts from one to three days and incapacitates briefly one-third of those affected. The cause of *Turista* remains unknown, but viruses, *Salmonella* and *Shigella* species, and *Endamoeba histolytica* could not be incriminated in these studies. Shifts in the bacterial populations of the intestinal tract, possibly involving enteropathogenic stains of *Escherichia coli* are suspect. The incidence of *Turista* can be reduced substantially by the prophylactic use of phtalylsulfathiazole, (2 gm daily) or neomycin sulfate (1 gm daily). Entero-vioform and a lactose placebo are ineffective. Furazolidine, on the basis of limited studies, has questionable usefulness. Simple hygienic precautions and symptomatic treatment remain the current recommendations for travelers to Mexico.

Smoking Behavior, Recreational Activities and Attitudes Toward Smoking: Study of Schoolchildren—E. J. Salber, R. B. Reed, S. V. Harrison, and J. H. Green. Pediatrics 32:911 (Nov.), 1963.

Differences between smokers, discontinued smokers, and nonsmokers in the use made of leisure time activities and in their attitudes and beliefs about smoking and health are explored. Smokers spend a greater amount of time watching television and less time reading books than do nonsmokers. Their friends are more often smokers, and they go to the movies more frequently, attend dances oftener, and are car owners more often than are nonsmokers. On the other hand, they play less sports and belong to fewer clubs and organizations. More nonsmokers than smokers consider smoking to be a cause of increased nervousness, to cause lung cancer, and to have a deleterious effect on growth, athletic ability, and health. There is a general shift in attitude from junior to senior school in the direction of more tolerance toward smoking except in the belief that lung cancer is caused by smoking and that smoking stunts growth. Differences found between smokers and nonsmokers remain consistent within each social class.

CASE REPORT

Prolonged Diaphragmatic Paralysis Following Pulmonary Embolism*

Morris Pasternack, M.D., Memphis, Tenn.

Deep venous thrombosis as an early complication of surgery occurs less frequently now than in the past because of well established prophylactic measures in the immediate postoperative period. More often this complication occurs during prolonged convalescence following an operation, severe injury, or an immobilizing nonsurgical disease. Pulmonary embolism likewise follows the same pattern, and many minor episodes are not recognized clinically, especially in nonsurgical disease.

The following case is of interest because of the sequence of events leading to a common but often ignored source of pulmonary emboli, i.e., thrombosis in the periprostatic veins, and also the uncommon complication of prolonged diaphragmatic paralysis following pulmonary infarction.

A 51 year old white refrigeration engineer, was seen on June 26, 1961 at 2:00 A.M., complaining of severe mid and right chest pain. Respiratory movements had no effect on the pain, though it was more intense when he was lying down. No significant shortness of breath was present.

The patient had a history of chronic prostatic infection for several years with evidence of progressive obstruction. A transurethral resection was done on May 23, 1961. The immediate postoperative course was uneventful and he was discharged from the hospital on May 28. Two days later the patient was readmitted to the hospital because of hematuria and evidence of prostatic infection. Symptoms subsided with treatment, and the patient was discharged from the hospital on June 9. Treatment for the prostatic infection was continued and there was no further significant difficulty until the onset of chest pain.

Physical examination revealed the B.P. to be 140/80, T. 99.8, R. 22, P. 90. The cardiac rhythm was regular, and no murmurs or rubs were heard. The lung fields were clear except for diminished breath sounds over the right base. The abdomen was soft and no tenderness was present. There was no leg or thigh tenderness and Homans' sign was not present. Morphine sulphate, 15 mg., was given which promptly relieved the pain.

An EKG on June 26, revealed a normal electrical axis. R waves were absent in AVL, V1, and V2, and low in V3. T waves were iso-electric in Lead I and inverted in AVL, V1, and V2. These findings were interpreted as being abnormal but nonspecific. Postero-anterior and lateral chest films on June 26, revealed marked elevation of the right diaphragm with adjacent pleural reaction. A diagnosis of pulmonary embolism was made, and anticoagulant therapy was started. The source of the embolism was considered to be the periprostatic veins.

The hospital course was uneventful. Serial chest x-ray films and chest fluoroscopy further confirmed the diagnosis of pulmonary infarction, and also revealed the persisting diaphragmatic paralysis on the right side. Only paradoxical motion of the right leaf of the diaphragm was noted.

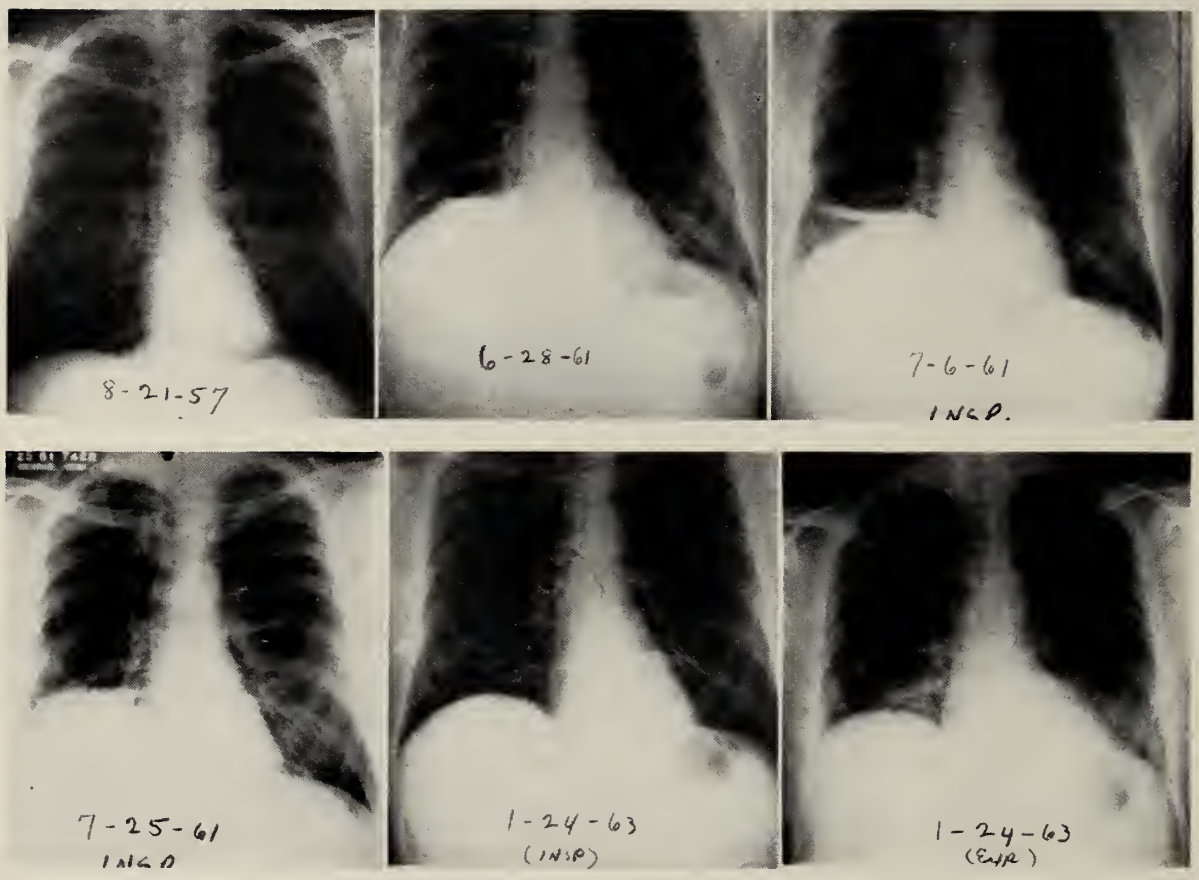
The patient was discharged from the hospital on July 12, and anticoagulant therapy was continued until December, 1961. Observation at intervals since 1961 revealed an asymptomatic persisting paralysis of the right leaf of the diaphragm, until the last visit in January, 1963. At this time movement of the right leaf of the diaphragm was observed. A chest x-ray made on deep inspiration revealed a descent of the right leaf to within about two inches of the level noted on an x-ray made in 1957.

Discussion

Despite the general awareness of the possibility of deep venous clot formation followed by pulmonary embolism in both surgical and nonsurgical patients, and the vast literature on the subject, DeBakey[1] has pointed out that the error in diagnosis of pulmonary embolism is well over 50%, including massive as well as small emboli.

Ochsner and DeBakey[2] stressed the difference between phlebothrombosis in which there is an intravascular clot loosely adherent to a vein wall and thrombophlebitis with a more adherent clot attached to an inflamed vein wall. Allen, Barker and Hines[3] feel that a phlebothrombosis will usually exist only a short time without a phlebitis and that with a rapidly propagating thrombus, both may be present at the same time. In any case, the larger the involved vein with loosely adherent thrombus, the greater the likelihood of massive pulmonary infarction due to a large embolus.

Moran[4] stressed the frequent occurrence of pulmonary embolism in nonsurgical patients. His work was based on a study of 635 consecutive autopsies, and showed that the prostatic plexus of veins was the most frequent source of pulmonary embolism in males (45.3%). In over half of the patients with prostatic thrombi, there was associated pulmonary embolism. Moran[4] also found that congestive heart failure was the outstanding etiologic factor in producing prostatic thrombosis. Crutcher and Daniel[5]



noted that the source of 23 of 55 fatal cases of pulmonary embolism was in veins of the pelvis or upper abdomen.

While the case reported is postsurgical, the pathogensis of the abnormality can for practical purposes be considered the same as nonsurgical, i.e. trauma, stasis, and infection. In the nonsurgical case the trauma might be rapidly occurring edema of the prostate in congestive heart failure. The symptoms and signs of pulmonary embolism have been well defined but at times there may be considerable confusion from a diagnostic standpoint, especially if there is known concomitant cardiovascular disease.

Impairment of diaphragmatic movement will often occur with low lying pulmonary infarction but it usually clears up within a few months. In the case reported there was some degree of impairment of motion of the affected leaf of the diaphragm for over 18 months and it must be assumed that there was severe injury of the phrenic nerve at or near the diaphragm. Douglass and Clagett[6] studied 59 cases of idiopathic diaphragmatic paralysis. One case was explored and the phrenic nerve was found to traverse a fibrotic mass. It was freed and there was a partial return of function. One can only speculate that undiagnosed pulmonary emboli could be a factor in some of these cases.

Summary

A case of acute pulmonary embolism occurring 5 weeks after a prostatic operation and presenting prolonged right diaphragmatic paralysis has been discussed. It might be speculated that since many episodes of pulmonary embolism are not diagnosed clinically, there may be an etiologic relationship in some of the cases of idiopathic diaphragmatic paralysis.

References

1. DeBakey, M. E.: Collective Review: A Critical Evaluation of the Problem of Thromboembolism, Int Abst Surg 98:1, 1954.

2. Ochsner, A. and DeBakey, M. E.: Thrombophlebitis and Phlebothrombosis, The Southern Surgeon. 8:269, 1939.

3. Allen, E. V., Barker, N. W., and Hines, E. A., Jr.: Peripheral Vascular Diseases, ed. 2, Philadelphia, W. B. Saunders Co., 1955.

4. Moran, T. J.: Pulmonary Embolism in Nonsurgical Patients with Prostatic Thrombosis, Amer J Clin Path 17:205, 1947.

5. Crutcher, R. R. and Daniel, R. A., Jr.: Pulmonary Embolis: A Correlation of Clinical and Autopsy Studies, Surgery 23:47, 1948.

6. Douglass, B. E. and Clagett, O. T.: The Prognosis in Idiopathic Diaphragmatic Paralysis, Dis Chest 37:294, 1960.

Urinary 5-Methoxytryptamine in Patients with Rheumatic Fever. Charles H. Haddox, Jr., and Milton S. Saslaw. J. Clin. Invest. 42: 1963.

During a study of the tryptophan-nicotinic acid metabolic series in 48 children with rheumatic fever or rheumatic heart disease, active or inactive, the authors found an unknown substance in the urine of these patients which was absent in all but one of 33 nonrheumatic control subjects.

Isolation of this unknown indole was performed by column chromatography using Dowex 50 resin. Successful identification of the indole as being 5-methoxytrytamine was performed by comparison of the paper chromatography R_f values, melting point values, and the infrared spectrum of the crystallized unknown indole to the values and spectra of 5-methoxytryptamine.

Quantitative analyses of other tryptophan metabolites were performed and no significant differences were found between children with rheumatic disease and control children, with the exception of a significant decrease in the amount of urinary indoxysulfate secreted by children with either rheumatic heart disease or rheumatic fever. The one normal control subject, an adult, who had detectable urinary 5-methoxytryptamine had normal indoxylsulfate levels. The lowered indoxylsulfate levels in rheumatic subjects may be due to altered intestinal flora from the antibiotic prophylaxis they were all on. The authors state that altered flora probably does not account for increased urinary 5-methoxytryptamine.

Oral tryptophan loading tests (with 5 Gm. of L-tryptophan) revealed a four-fold increase in 24 hour urinary 5-methoxytryptamine values in rheumatic heart disease patients, but this substance did not appear in the urine of normal controls during the test.

The authors suggest that the observed metabolic abnormality in rheumatic subjects may represent a disfunction of a specific monamine oxidase or an increased o-methyltransferase activity.

If specificity of this test is verified by further studies and a simple technic for identification of 5-methoxytryptamine is developed, the diagnosis of rheumatic fever would be facilitated. (Abstracted for the Middle Tennessee Heart Association by Paul K. Burkholder, M.D., Nashville.)

STAFF CONFERENCE

Vanderbilt University Hospital*

Pseudomyxoma Peritonei

DR. WALTER A. BONNEY, JR.: For the staff conference today we have a classical example of a pseudomyxoma peritonei. Doctor William Preston will present the case.

DR. WILLIAM PRESTON: This 41 year old, negress, gravida 0, patient was admitted to the Vanderbilt University Hospital on 20 May 1963 with the chief complaints of abdominal swelling and shortness of breath. Prior to that time she had last been seen in the Medical Outpatient Department in Oct. 1962, at which time she was thought to have ascites and a palpable right adnexal mass, and admission to the hospital was advised. The patient did not return to the hospital until the night of the present admission. She had noted progressive abdominal swelling over the past 15 months and had gained approximately 45 lbs. of weight during the same period. For the past 2 months she had noted progressive swelling of her lower extremities, shortness of breath, and periodic episodes of palpatations. Approximately 30 days prior to admission she had suffered the onset of intermittent vomiting, usually occurring at night, which had continued until the time of admission. (Fig. 1.)

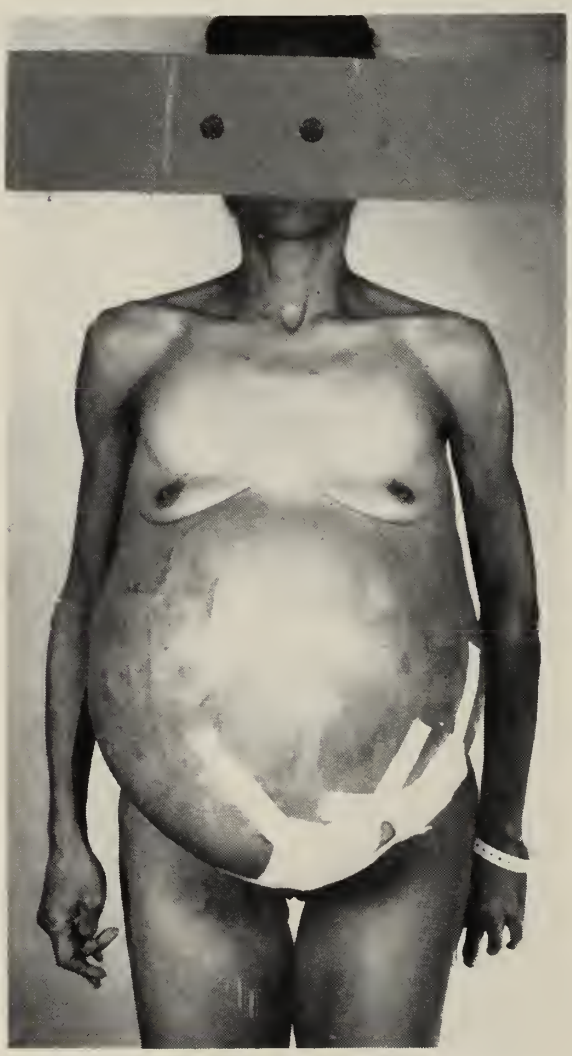


FIG. 1. Preoperative abdominal distension.

Past Medical History. At exploratory laparotomy in 1949, infected tubes and chocolate cysts of an ovary were removed.

Physical Examination. B.P. was 140/110; P. 200, with labored, shallow respirations. She was a thin, colored woman with massive abdominal distention and lower extremity edema. Examination of the chest revealed rales at both bases with the diaphragm approximately at the level of the scapulas posteriorly. Auscultation revealed normal heart sounds of good quality. The abdomen was tense, and a fluid wave could easily be elicited. There was massive pitting edema of the legs and presacral areas. No pedal pulse could be felt.

Laboratory Data. PCV. was 30%, SUN. 36; total proteins 7.2 with albumin 2.1 and globulin 5.1 Gm. per 100 ml. EKG showed a supraventricular tachycardia with ST-T wave changes. X-ray of the chest revealed marked elevation of the diaphragms and a flat plate showed a huge abdominal mass or ascites.

Course. Because of the apparent congestive heart failure the patient was rapidly digitalized and placed on diuretics. Paracenteses were done with the removal of approximately 1800 cc. of gelatinous fluid. A pseudomucinous identification test was carried out and the material was found to precipitate in acetic acid and was soluble in alcohol (true mucin soluble in acetic acid and precipitated by alcohol). The patient had an excellent response from the above symptomatic therapy and all signs of congestive heart failure disappeared. An exploratory laparotomy (Fig. 2) was carried out on 21 June 1963. At laparotomy, the abdominal cavity was found to be massively distended with huge quantities of thick, gelatinous, amorphous appearing material interspersed with cystic structures. The gross pattern was compatible with a pseudomyxoma peritonei. Total abdominal hysterectomy, omentectomy, right ovarian cystectomy, and removal of the free gelatinous fluid was performed. No appendix was visualized. The histological picture of the tissue submitted to pathology was compatible with a pseudomyxoma peritonei (Fig. 3). The patient stood the procedure well and immediately postoperatively had lost 40 lbs. of weight. Her recovery was uneventful, and she was discharged

*From the Department of Obstetrics and Gynecology, Vanderbilt University School of Medicine, Nashville, Tenn.



FIG. 2. Gelatinous material at operation.

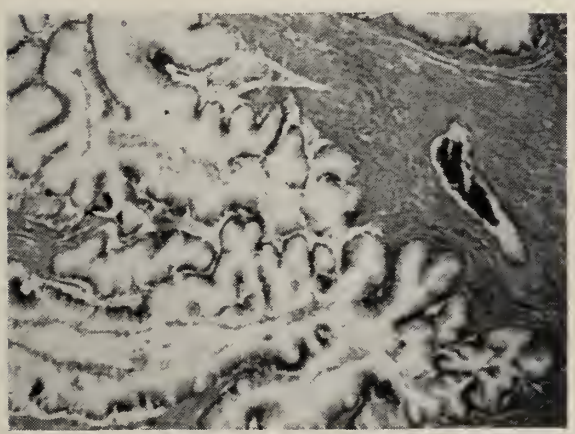


FIG. 3. Histologic appearance of the tumor.

on 21 June 1963. She has been seen several times in the clinic since discharge. Her abdomen has remained flat and her general condition is satisfactory (Fig. 4).

DR. BONNEY: Pseudomyxoma peritonei is a neoplastic tumor characterized by gelatinous masses within the pelvic and abdominal cavities. This neoplasm is most commonly derived from a pseudomucinous type tumor of the ovary, though *mucocele* of the appendix can likewise produce the condition. The typical jellylike material may be free within the peritoneal cavity or contained within cystic structures. Lining epithelium of the cysts histologically may appear benign or malignant. The classical tall columnar cells of pseudomucinous



FIG. 4. Six months following operation.

tumors are often difficult to identify because of the massive quantities of gelatinous material present. Precise mechanisms of production of the pseudomucin is unknown. The following theories have been given to explain its presence: (1) epithelial cells of pseudomucinous tumors produce the material; or, (2) the gelatinous material extravasated from the tumor mass becomes an irritant to the peritoneum, and peritoneal cells, in turn, are converted in part to columnar epithelium and they produce the majority of the gelatinous material.

Incidence of pseudomyxoma peritonei occurring as a complication of pseudomucinous tumors of the ovary is thought to be approximately 4%, although some authors have reported higher figures. At the Vanderbilt University Hospital, 2 cases of pseudomyxoma peritonei have occurred in the past ten years out of a total of 35 pseudomucinous tumors of the ovary.

The most common presenting symptom is abdominal enlargement. Sixty-three per cent of the cases reported by Masson and Hamrick[1] presented with this complaint. Pain was present in 50% of the cases. The average age of the patient was 50 years with 80% past the age of 40. Primary treatment is surgical, and the tumor masses should be removed along with the ovaries, fallopian tubes, and uterus. A thorough search should always be made for the appendix because this organ may be the site of an occasional pseudomyxoma peritonei. Irradiation is commonly used after surgery in this country, though without great success.

Prognosis is guarded in all cases of pseudomyxoma peritonei. There is no uniform opinion as to whether pseudomyxoma peritonei should be considered malignant or benign. Cariker and Dockerty[2] reported that 44 of 138 cases of malignant pseudomucinous tumors had pseudomyxoma peritonei as a complication. Thirty-five of these patients died and 6 lived for five years. Three were not traced. Malpas[3] considered the condition to be malignant. Shanks[4] reported that of 12 cases of pseudomyxoma peritonei, 10 were benign and 2 were malignant. Both cases with histologically malignant disease died within two years; whereas, 2 cases with histologically benign disease died within five years. Of the remaining patients, 2 were alive after five years with recurrent tumor, and 5 were alive from six months to six years without obvious tumor. In spite of the fact that no malignant epithelial cells may be found, patients with pseudomyxoma peritonei should be considered to have a lethal disease even though, as with all tumors, a few cures have been effected. The major difficulty in determining malignancy or benignity on histological sections may be a technical one. The tumors grow to such massive proportions and the epithelial components are so distorted that it is not always possible to properly identify histologic grades of malignancy. Frequent follow-up observations are most essential in patients with this disease. The major posttreatment complication is bowel obstruction due to recurrent tumor masses. Many of these patients require multiple operations for relief of this complication.

DR. ROBERT NOYES: We were fortunate to have the cooperation of the medical department in preparing this patient for surgery. Timing of the operation was a difficult decision because of the critical nature of her physical condition. The congestive heart failure was apparently related to the tremendous abdominal distention and, fortunately, responded well to symptomatic therapy. At operation we encountered huge quantities of pseudomucinous materials which distorted the pelvic and abdominal anatomy. The tumor was thought to have arisen in the right ovary and portions of this organ could be identified. The left ovary could not be seen. The patient's postoperative course was quite satisfactory and we considered ourselves fortunate to be able to discharge this patient in good condition.

DR. SWAN BURRUS: The problem of subsequent management of this patient is difficult. There seems to be no unanimity of opinion as to modes of therapy. Although this tumor is felt to be generally radio-resistant, there is no firm evidence to support this, and most institutions use some form of radio therapy in postoperative management. The value of chemotherapeutic agents in the treatment of this condition is not known. Since this patient, at the pres-

ent time, is asymptomatic and without evidence of a tumor mass or ascites, we plan to defer any further therapy until problems arise.

DR. GORDON PEERMAN: Frequent close observations of this patient are most essential. The major problem which we will probably face will be that of intestinal obstruction. This complication can be handled surgically as the problem arises.

DR. ROBERT CHALFANT: Because of the rarity of this condition, one's own experience is limited. Should abdominal distention without evidence of bowel obstruction occur, I would favor radiation therapy in this patient. I do think that the radiation therapy shoud be individualized according to the presenting problem.

DR. BONNEY: We have presented a classical case of pseudomyxoma peritonei. The problems and management of this condition have been discussed and we are hopeful that this patient will continue asymptomatic for a long period of time.

References

1. Masson, J. C. and Hamrick, R. A.: Surg. Clin. N. Amer. 10:61, 1930.

2. Cariker, M. and Dockerty, M.: Cancer. 7:302, 1954.

3. Malpas, P.: J. Obst. & Gynaec. Brit. Emp. 66:247, 1959.

4. Shanks, H. G.: J. Obst. & Gynaec. Brit. Comm. 68:212, 1961.

Canadian Thalidomide Experience—J. F. Webb. Canad. Med. Assn. J. 89:987 (Nov. 9), 1963.

Data are presented on 115 children including three sets of twins born in Canada in 1961 and 1962 with congenital malformations associated with the use of thalidomide by their mothers in early pregnancy. The epidemiological method is described. Of the children, 74 were alive at the time of reporting, 41 of these being severely handicapped; 8 had been stillborn, and 33 had died. Limb involvement was usually bilateral, affecting upper limbs alone in 42 cases, upper and lower limbs in 41. Of 112 mothers, only 60 were prescribed the drug by the physician providing maternity care; 87 were estimated to have first taken the drug before their last menstrual period or within 56 days afterward. A plea is made for the aid of practicing physicians in the development of better methods of collecting information on the occurrence of congenital malformations.

CLINICOPATHOLOGIC CONFERENCE

Veterans Administration Medical Teaching Group Hospital

Primary Carcinoma of the Liver

Case Presentation

Present Illness. This was the 5th admission of a 65 year old white male carpenter.

His first admission was 4 years before. At that time he was discharged with the diagnosis of perforation of the anterior nasal septal, chronic deafness, bilateral of mixed type, external hemorrhoids, and heptamegaly of undetermined etiology. His liver at that time was described as being soft, not nodular, nontender and extending 3 finger-breadths below the right costal margin. Approximately a year and a half later he was again admitted with degenerative joint disease of his right hip. The STS was found positive and he was treated with 9,000,000 units of penicillin. An arthroplasty of his right hip was done with the insertion of a metallic prosthesis. He also had a hemorrhoidectomy. While in the hospital he dedeveloped thrombophlebitis of his right leg and a a bilateral ligation the superficial veins was done. He developed clinical and x-ray evidence of pulmonary infarction. Six months later he was admitted for gynecomastia on the left, and a mastectomy was performed.

His last two admissions were within 2 months of each other and for the same complaints. For about 4 months prior to these admissions he had swelling of his abdomen and continuous abdominal pain. His appetite had decreased, but there had been no vomiting or nausea. He had been having two bowel movements daily which were loose and a light yellow in color. There was no melena. He denied having had jaundice, although he was obviously jaundiced on his last admission. He said that he occasionally vomited blood, but how often and what amount could not be ascertained. There had been a loss of weight of undetermined amount. The history was difficult to obtain because of his marked loss of hearing. There was no fever, chills, or night sweats, and no history of angina or paroxysmal noctural dyspnea could be obtained. He drank beer occasionally, but denied drinking to excess.

P.E. B.P. was 110/80, T. 98 and P. 80. The patient appeared emaciated, but not in acute distress. There was marked hearing loss. The sensorium was clear, but he was slow to respond. The sclerae and skin were icteric. No distention of the neck veins was noted, and the thyroid was not enlarged. The pupillary reflexes, fundoscopic examination were negative. The lungs were clear and the cardiac examination was not remarkable. There was marked ascites. The liver was tender and was down about 3 finger-breadths below the right costal margin. The spleen was not palpable. The superficial abdominal veins were distended. There were scars in both inguinal areas from the previous vein ligation, and a scar of the hiparthroplasty with the hip operation. The rectal examination revealed external and internal hemorrhoids, and there was light brown stool present. A small, movable, firm nodule was palpable in the cul-de-sac. The prostate was negative. No adenopathy was present. The patient was barely able to stand with help at the time of admission, but there was no localized weakness. Bilateral Gordon and Babinsky reflexes were present. Vibratory sense was present in the ankles.

Laboratory Data. The Hgb. was 13.2 Gms., PCV. 39%, RBC. count 4.45M., E.S.R. 37 mm. corrected, WBC. count 8,650, with 84% neutrophils, 12% lymphocytes, 4% monocytes and 1% basophils. Stools for occult blood were negative on three occasions, and one stool was negative for ova and parasites. STS. was positive 1+. The initial BUN. was 43 mg.%. Urinalysis revealed a trace of albumen, 1 to 2 casts, 12 to 15 WBC. and 3 to 4 RBC/HPF. Harrison spot test was 2+, and urine urobilinogen was 1:32. The initial direct bilirubin was 2.6 and a later repeat 5.5, and the initial total was 4.9 and the final was 7.4 mg.%. Cephalin flocculation and a repeat were 3+ and 4+ after 24 and 48 hours, respectively. The thymol turbidity was 13 and 12.5 units. Alkaline phosphatase was 14.5 and 9.7 B.U., cholesterol 520 mg.%, prothrombin time 55%, A/G ratio 3.2/4.3 Gm. and SGOT was 460 units. X-ray film of the chest revealed a small mottled infiltrate overlying the anterior portion of the first rib on the right. The gallbladder was not visualized on oral cholecystogram. Upper G.I. investigation was as follows: fluoroscopically the esophagus was not remarkable; there was marked straightening of the lesser curvature of the fundus and pars media of the stomach; on the greater curvature surface of the fundus there was considerable irregularity and distortion of the mucosal pattern, and there was evidence of a soft tissue mass displacing the stomach to the left. A liver biopsy showed a normal liver and cytology of the ascitic fluid revealed no atypical cells.

Hospital Course. The patient was placed on a diet for liver regeneration, vitamins, and given intravenous glucose and saline. The temperature was normal throughout his hospital course. His condition progressively worsened and he became weaker in spite of therapy. The BUN. rose to 71 mg.%. Terminally, he was vomiting and had become semicomatose. He was catheterized with difficulty because of obstruction in the posterior urethra. On the 14th hospital day, after having a

---

From the Medical and Laboratory Services of the Veterans Administration Medical Teaching Group Hospital, Memphis, Tenn.

...com the ...xecutive ...irector

MEDICAL DIGEST

News of Interest to Doctors in Tennessee

Fire! Fire! Fire!

● A report in the January 6 issue of U. S. News and World Report says that Welfare costs in the U.S. soon will pass defense costs in total. Be sure to read a SPECIAL REPORT on "How Much More of a Welfare State For U.S." that appears on page 62 of the January 6 issue. Welfare costs do not include a program of hospital insurance for old people or any other new programs.

Social Security Taxes To Leap Up

● U.S. News and World Report states, that in practical terms, payroll taxes for Social Security alone:

Now: 7.25 percent of income up to $4,800. In 1966: Rise to 8.25 percent. In 1968: Go up to 9.25 percent. Add hospital insurance, and these taxes then rise one half of one percent, and income subject to tax goes up to $5,200.

Or, in dollar terms: Payroll tax now is $348 a year per individual who receives the maximum. In 1966, it goes to $396. In 1968, the rise is to $444. Hospital-insurance cost, if added, would bring payroll tax in 1965 to $403 for each person per year; in 1966, to $455; and in 1968, to $507.

That's before any private-pension costs and involves only Social Security. Unemployment-compensation costs are separate.

The King-Anderson Bill (H.R. 3920) on health care for the aging financed through Social Security will be acted upon this year. Make your views known to your Congressmen and Senators . . . NOW . . . NOW . . . NOW.

AMA House of Delegates Actions—December 1-4, Portland, Oregon

● Tobacco and health, the rights and privileges of Negro physicians, revision of the AMA Constitution and By-laws, voluntary health agencies and blood banks were among the major subjects acted upon by the House of Delegates of the American Medical Association meeting held December 1-4 in Portland, Oregon.

Tobacco and Health

● The House approved a proposal that the American Medical Association Education and Research Foundation undertake a "comprehensive program of research on tobacco and health". The financing of the study is to be made from contributions of AMA and funds solicited from industry, foundations, voluntary health agencies and physicians. Subsequent to the House action, AMA will contribute $500,000 to help finance the research program.

Negro Physicians

● The House considered two proposals related to Negro physicians—a Board of Trustees report on hospital staff privileges and a resolution concerning membership eligibility in state and county medical societies. In adopting the Board report, the House declared that "members of the medical staff of every hospital, where the admission of physicians to hospital staff privileges is subject to restrictive policies and practices based on race, be urged to study this question in the light of prevailing conditions with a view to taking such steps as they may elect to the end that all men and women professionally and ethically qualified shall be eligible for admission to hospital staff

privileges on an equal basis, regardless of race". A resolution rejected by the House called for denial of the rights and privileges of AMA membership to members of any state or county society which refuses membership to any qualified physician because of race, religion or place of national origin—the House reaffirmed 1950 and 1962 policy actions on this subject and directed that a copy of the resolution be sent to each state and county medical society. That resolution urged that "constituent and component societies having restrictive membership provisions based on race, study this question in the light of prevailing conditions with a view to taking such steps as they may elect to eliminate such restrictive provisions".

AMA Constitution And By-Laws

● The following revisions were the principal ones made in the Constitution and By-Laws: (1) The Annual and Clinical "Sessions" have been renamed the Annual and Clinical "Conventions". (2) The word "constituent" has been changed to "state". (3) Two types of membership have been created, "Active" and "special". (4) A quorum will be 100 of the voting members of the House rather than 75. Other minor amendments were made.

Voluntary Health Agencies

● In approving a Board report on professional relationships with voluntary health agencies, the House declared that "the AMA maintain its policy of neither approving nor disapproving national voluntary health agencies". The AMA's Committee on Voluntary Health Agencies will continue to offer guidance on medical aspects of national voluntary health agency programs. The House also approved the "Principles for Medical Guidance to National Voluntary Health Agencies" which contain a new definition of a voluntary health agency, objectives of the Committee on Voluntary Health Agencies and a list of suggested mutual obligations between the AMA and the national voluntary health agencies.

Blood Banks

● The House adopted a policy statement pointing out that "it is highly essential that the organization of new blood banking programs and the modification of existing ones should have, in the interest of the public health and safety, the approval of the county or district medical society and, therefore, should be coordinated with existing approved blood banking facilities." Also recommended was the fact that the top authority in a blood bank should be a physician.

Other Actions Were:

●——Changed the name of the Council on Scientific Assembly to the Council on Postgraduate Programs——Changed the name of the Council on Medical Education and Hospitals to the Council on Medical Education——Approved an amendment to the By-Laws which would permit the opening session of the House of Delegates to be held on Sunday afternoon or evening——Expressed gratification of the work of the Committee on Medicine and Religion——Requested the AMA to seek improvements in the format of its American Medical Directory to make it easier to use——Studied the feasibility of opening the Clinical Meeting two Sundays prior to Thanksgiving Day ——Urged that the term "the aging" be used instead of "the aged" in all statements by the medical profession regarding older persons——Urged State Medical Associations to explore the advantages of implementing Kerr-Mills programs in a manner which will permit the care of beneficiaries under voluntary health insurance programs——Reaffirmed the Association's policy of opposing the inclusion of self-employed physicians under Social Security.

Public Service

THE TENNESSEE TEN

Hadley Williams, Public Service Director

Operation Hometown

● Immediate activation of Operation Hometown committees is imperative. H.R. 3920, the King-Anderson Bill, will be making headlines during the next few weeks. The big push in Washington has begun with an all-out effort for passage this Spring as the goal. The time for action is now!

Hearings on King-Anderson will resume this month and those scheduled to testify are mainly proponents of the legislation—labor and senior citizens groups. A vote in the Ways and Means Committee can be expected this Spring.

Committees already established for implementation of Operation Hometown need to begin work. County medical societies that have not appointed a committee, as yet, should do so now. The Public Service Office will assist any society that desires help in establishing an Operation Hometown Committee. A seven-phase program, Operation Hometown is designed for county society use. Plans and materials are provided for such activities as: The Formation, Training and Operation of a Speakers Bureau; The Enlistment and Utilization of Allies; Newspaper, Television and Radio Relations; The Development of an Effective Letter-Writing Campaign; The Distribution of Educational Materials; and a Congressional Contact Program.

Each county society president has received an Operation Hometown kit. Let's put it to work with an effective campaign to inform the public in your hometown of the real dangers involved in King-Anderson. Now's the time to begin!

Wires to Washington at Reduced Rates

● The Western Union Telegraph Company now offers a special rate to those citizens who wish to express their views on legislation to their congressional representatives in Washington.

Called P.O.M. (Public Opinion Message), a 15-word message, plus the sender's name and address, costs only 85 cents.

Telegrams and letters to members of Congress have tremendous impact. Elected representatives want and respect the opinions of their constituents.

If each member of the Tennessee Medical Association would ask five non-physicians to wire their congressman—opposing H.R. 3920—over 15,000 telegrams could be sent from Tennessee. The effect would be overwhelming.

Every Tennessee physician should have a supply of the pamphlet "Write Your Congressman and Senators". This concise folder contains a map of the state with congressional districts outlined plus the names and addresses of each congressman. A few reasons for opposing King-Anderson are also included. These pamphlets are available in any quantity from the Public Service Office.

Javits Offers K-A Compromise Proposal

● The National Committee on Health Care for the Aged, headed by Senator Jacob Javits of New York, made recommendations recently which would offer a compromise to the King-Anderson proposal.

Under this new proposal, one-third of the medical care costs for the aged would be paid for by the Federal Government through an unspecified increase in the Social Security tax. One-third would be financed by private insurance com-

panies under favored tax benefits, and one-third would be paid by the individual.

Dr. F. J. L. Blasingame, Executive Vice-President of the American Medical Association, expressed the AMA's opposition to the plan saying, "It would still force increased payroll taxes on the nation's working people and their employers to buy hospitalization and nursing home care for all the aged without any regard to whether they were wealthy or fully protected with health insurance."

As Others See It—Quotes and Comments

● The following are editorials that have appeared recently in Tennessee newspapers:

THE LEXINGTON PROGRESS—"It has been claimed that the American people want the King-Anderson bill—that is, the Medicare bill, which would provide a variety of medical services to everyone drawing social security benefits, whether they wanted them or not, and whether they need them or not.

"It's one thing to make a claim—and a very different thing to prove it.

"There is some factual evidence on this matter—and it is impressive by any standard. Members of Congress from districts in Ohio, Michigan, Illinois, South Dakota, New Jersey, California and Pennsylvania have polled their constituents asking for their opinions on Medicare. In every case the majority was opposed—usually by very substantial margins.

"Only two polls approved the increase in social security taxes to finance the plan.

"This is a remarkable showing, particularly in view of the all-out campaign, directed from Washington, designed to sell Medicare to the people. And it certainly is not the result of any callous disregard on the part of the public, in any age group, to the medical problems of the aged. It is instead based on the known fact that a very large percentage of the elderly are able to meet their medical costs; that both federal, state and local systems exist and are functioning to aid those who cannot; and last, but not least, that Welfare Statism has gone too far and must be checked. Medicare is an excellent place to check it."

THE CLEVELAND DAILY BANNER—"Top labor union spokesmen have supported legislative proposals that would place the practice of medicine under the authoritarian control of government. Notable was the enthusiastic advocacy by these spokesmen of the King-Anderson bill which would open the way to socialized medicine and subject doctors and patients to government compulsion.

"The proposed bill decreed 'The amount paid to any provider of services . . . shall be the reasonable cost of such services, as determined in accordance with regulations.' The Secretary of Health, Education and Welfare would prescribe 'such regulations.' The bill departs from the cash concept of the social security system by offering service benefits, a change which would give monopoly purchasing power to the government and would deny freedom of contract to those who provide the service. The implications of such legislation reach far beyond medicine.

"And yet when the country was faced with the threat of an all-out railroad strike the heads of the unions suddenly took a different view of compulsion. They rejected the suggestion of the President that differences between rail unions and management be submitted to binding arbitration. In this case, union leaders declared, 'We are being asked to agree to a procedure which we believe would pave the avenue to future compulsory arbitration by custom or practice. This we cannot agree to do as a matter of principle.'

"What's the old saying about the shoe being on the other foot? Or whatever it is."

Foley catheter inserted, the patient had an involuntary stool and expired.

Discussion

DR. KIER: There could be a good many points of departure for discussing this case, but I would like to direct my attention first to the jaundice. The patient had bile in the urine which in itself tends to rule out hemolysis, and this is corroborated by the elevation of the direct bilirubin fraction. Other than this the fractionation of the bilirubin tells us nothing, since this particular pattern with both direct and indirect elevation is typical of either parenchymal or obstructive jaundice. Let us turn to the alkaline phosphatase and cholesterol. These, on the other hand, do give us some differential information. They are both definitely elevated which suggests obstruction. The prothrombin time of 55% could result from either parenchymal or obstructive causes. Since we do not know its response to vitamin K it is not helpful as a differential point. How about the SGOT? Originally, elevation of this enzyme was thought to represent necrosis of hepatic cells but we now believe there need not necessarily be necrosis, but merely impaired permeability of the cell membrane. There now seem to be many things that can cause its elevation. It can rise in obstructive jaundice, but usually in this situation the elevation is of low grade. Occasionally, though, it can reach 400 or 500 units. The fact that this patient's value of 460 units is higher than in the average case of obstruction makes us incline toward the idea of some parenchymal damage. There are other tests that tend to confirm this impression. The thymol turbidity was definitely elevated on two occasions. This test measures primarily alterations in gamma globulin, but it also can be elevated in hyperlipemia. However, in my experience, when the neutral fats are high enough to cause an abnormal thymol turbidity, there is gross turbidity of the serum that is apparent to the laboratory technician, who will be unable to do certain tests such as bilirubin determinations. I think, therefore, it is unlikely in this case that the thymol turbidity elevation represented neutral fat in the serum and believe it probably did reflect globulin alteration. This is further suggested by the 3+ and 4+ cephalin flocculation, which is not altered by lipids but only by serum protein abnormalities. These two tests, plus the globulin elevation, are, of course, not really liver function tests. However, when all three are abnormal, particularly when coupled with a low serum albumen, it is highly suggestive of parenchymal liver disease. So at this point we have a liver profile which has obstructive features such as the cholesterol and alkaline phosphatase values and also shows evidence of parenchymal damage.

Let us now consider diffuse parenchymal diseases. We know that several parenchymal liver diseases have an obstructive component. Could this be hepatitis? Quite often in cholangiolitic hepatitis the alkaline phosphatase and cholesterol will be high and in cholestatic drug hepatitis this is also true. However, we have a normal liver biopsy which would seem to rule this out. Is cirrhosis a possibility? Alkaline phosphatase may be elevated in uncomplicated cirrhosis, but usually not to the level found in cholangiolitic hepatitis. Again, though, the biopsy would appear to rule this out. I cannot say with 100% accuracy that it rules out cirrhosis. In a recent review 510 patients with needle biopsy of the liver had been followed to postmortem. It was found that, if an adequate specimen was obtained, the diagnosis was 100% accurate in Laennec's cirrhosis but in post-necrotic only 96% accurate, presumably because there may be some normal areas in post-necrotic cirrhosis. I would say, though, that I am not willing to bet against 96 to 4 odds, and I think we can reasonably well rule out diffuse liver disease.

What else can explain the combination of obstructive features and parenchymal damage features? Extrahepatic obstruction can produce such a picture. After a long period of obstruction the liver becomes damaged because of the increased pressure and the parenchymal tests begin to become abnormal. I think if this were true we should find cholangioles with bile plugging, and if this obstruction had caused parenchymal damage to the liver evidence of it should be fairly diffuse, so that a liver biopsy should pick it up. It seems to me

there is a clinical point also against extrahepatic obstruction. Apparently the man had ascites before jaundice. On his next to last admission he had a distended abdomen. Dr. Greenberg, our Chief of Radiology, has let me see his films, and they appear to me to show evidence of ascitic fluid. However, the patient was not jaundiced until his last admission, two months later. A stone in the common duct, carcinoma of the head of the pancreas, the ampulla of Vater, or the extrahepatic bile ducts would usually cause jaundice fairly early and one would expect ascites later. With the combination of a normal liver biopsy, plus the ascites appearing before the jaundice, it appears to me that this is against extrahepatic biliary obstruction. The evidence seems to indicate a liver that at least in one area is normal but must in other areas be abnormal. This supposition brings us to the thought that perhaps this is a space-occupying lesion, that part of the liver is normal and yet an enlarging lesion somewhere else in the liver is invading, compressing, destroying parenchymal cells, possibly compressing large intrahepatic bile ducts.

At this point I want to consider several of these space-occupying lesions. One that I think is not too likely is liver abscess. This man gave no history of fever or chills and in the hospital was afebrile and had no white count elevation. This seems much against liver abscess. The large solitary pyogenic and amebic abscesses rarely produce jaundice. Jaundice is more likely in multiple liver abscesses that occur from an ascending cholangitis or pyleophlebitis, but particularly in these two situations would one expect a high fever and white count elevation. I think, therefore, liver abscess is unlikely.

We know that in previous years the man had syphilis. Could this be a gumma? I have never seen one and I think it must now be a medical rarity. Gumma, though, would have normal areas and might also have evidence of abnormal parenchymal function tests and obstructive tests which would fit with this liver profile. The course usually is fairly benign in gumma, though it is said that in the healing stage, when a great deal of distortion and fibrosis occurs, there may be constriction of the hepatic veins with a Budd-Chiari Syndrome or of the portal vein with portal vein hypertension and ascites. However, this man had received treatment two and one-half years before with 9,000,000 units of penicillin, and usually there is not progression of gummatous lesions after treatment. I think therefore that gumma is unlikely.

The patient was said to have a slight infiltrate in his chest and we can see the x-rays later. I have looked at these films and am really not too impressed by the questionable infiltrate. It does, however, bring to mind the possibility of a tuberculoma of the liver. This is a large caseating mass of tuberculous origin. The patient generally has fever and chills which this man did not have and the lesion is rare. An even rarer type of tuberculous disease is tuberculous cholangitis, although I have seen one such case here. This is due to rupture of a tuberculoma into the intrahepatic biliary tract, but again, and particularly here, one would expect to have a septic course, toxicity, high fever and white count elevation. So I believe that this was not tuberculoma or tuberculous cholangitis.

I am not going to go into detail about parasitic disease. Schistosomiasis, when it produces clinical disease of the liver, usually produces a diffuse cirrhosis. An echinococcus cyst does not usually have this clinical course. The patient was not said to have been in any endemic areas, and because of this and the rarity of these diseases I do not think there is much likelihood he had one of them.

This brings us down to the possibility of neoplasm. This man died of his disease, and the particular course he pursued is almost never seen in benign tumors of the liver. I think, then, we can limit discussion to primary and metastatic liver malignancies. Perhaps this would be a good point, Dr. Ettman, to see the x-rays.

DR. ETTMAN: I selected the first film, prior to the apparent illness. At that time the purpose was to demonstrate the appearance of the diaphragm. As Dr. Kier mentioned, it was elevated, which would go along with ascites. The chest film reveals no obvious infiltration. To re-evaluate the apical areas, all I can see is what looks to

me like prominent vascular markings rather than actual infiltration of the lung. The gastrointestinal series reveals the stomach is displaced forward and there is a loss of peristalsis, and we notice a marked straightening along the lesser curvature aspect of the stomach, which gives the impression of either being displaced, or encroachment on the wall. In other words, there is an extramucosal involvement, and if any involvement is present it would be in the wall of the stomach. We note that the postbulbar area is also displaced by some extrinsic pressure.

DR. YOUNG: Dr. Ettman, what disease may cause such changes in the upper end of the stomach?

DR. ETTMAN: Well, we can see this same condition in a lymphosarcoma or lymphoma where there is extensive invasion of the wall, or it can be extrinsic mass which is invading the stomach. I believe this is an extra-mucosal type of lesion.

DR. YOUNG: Have you ever seen such a thing like that in a benign process involving, say, the submucosa of the stomach, causing dilated veins?

DR. ETTMAN: Well, if these are dilated veins, they seem to extend rather far down. The dilated veins we see in cirrhosis of the liver involving the lower end of the esophagus may also involve veins in the cardiac end of the stomach. Here is involvement extending along the mesial aspect of the stomach.

DR. KIER: Will you leave the x-rays up, please, as I may want to point out a few things as we go along.

I would first like to discuss primary liver carcinoma. This seems to be becoming a more frequent disease. Its rising incidence has been reported elsewhere and certainly we have seen a great deal of it at this hospital. About 75% of these patients have hepatoma beginning in a cirrhotic liver. This man apparently did not have a cirrhotic liver. This makes it a little less likely. Often, if one has a patient with cirrhosis it is difficult to suspect a primary hepatoma because he already has abnormal function tests and he may already have ascites from the decompensated cirrhosis. Sometimes there are certain clinical hints that can tip one off, such as a stony hard nodule, or a rapid downhill course that is otherwise unexplained, or severe pain. In ordinary cirrhosis there is not much pain whereas with hepatoma the pain is often fairly severe. This man, with a normal biopsy, apparently did not have cirrhosis, but his abdominal pain, ascites, jaundice, and emaciation would certainly be compatible with hepatoma. About 60% of patients with hepatoma will present with abdominal pain as their chief complaint. Two-thirds will have ascites and at least a half will have jaundice as did this patient. Some people describe fever but there is much controversy about this. Certain articles mention that it is quite common but others think its incidence is overrated. It does appear that fever is more common, though, in this neoplasm than in most others of the G.I. tract. Nevertheless, many patients are afebrile throughout the entire course, so the lack of fever in this man would not rule out hepatoma. He had a mild anemia and this is common. In hepatoma, unless the patient is bleeding from varices, he usually does not have as marked an anemia as patients with malignancies elsewhere in the G.I. tract. Hepatomegaly certainly is present in almost all. Oftentimes the liver tends to extend upward, and in about one-half of these patients one may not palpate the liver. On the first admission here this patient's liver was said to be enlarged three finger-breadths, and on this admission it was said to be down the same distance. It is obvious, however, that the liver has increased in size because you can see how much higher the diaphragm is on this last admission. Had stony hard nodules been felt in this liver it would have been helpful but frequently they are not present. What about the tests of parenchymal function? If a patient has a hepatoma in a noncirrhotic liver, usually it is only in the advanced stages that the parenchymal tests become abnormal, but when enough parenchyma is destroyed by invasion or compression of tumor masses parenchymal test abnormalities can occur. Also, in hepatoma infarction and necrosis frequently occur in the center of these large nodules, and this in itself can cause elevation of the flocculation tests and the SGOT. How high is the elevation of the SGOT in hepatoma? It

is usually about the same as in extrahepatic obstruction, 200 to 300 units, but whereas in extrahepatic obstruction it hardly ever gets over 500, it is not infrequent in hepatoma for it to go quite high, even to 1000 units. This seems correlated to some extent with the degree of parenchymal damage or with massive necrosis into the tumor nodule. I think in this man the value of 460 units is quite compatible with hepatoma.

Now we come to a very interesting, debatable but useful test, the alkaline phosphatase. This has always been the primary test to depend on in differentiating obstructive from parenchymal jaundice. A great deal has been written about it and the controversy still rages, at least as to the mechanism of its elevation. We know that most of it is formed in bone and most of it is excreted in bile. Therefore, obstruction of the extrahepatic ducts would be expected to elevate it, and indeed it is elevated in these circumstances. It is also not infrequently elevated in hepatitis. The proponents of the obstructive theory say that the reason is that in most hepatitis there is some degree of edema and obstruction of the bile canaliculi. However, we also know that some alkaline phosphatase is formed by the liver cells and by the small biliary canaliculi; so there is another school that believes alkaline phosphatase elevation can be produced by overproduction of the enzyme as a response to any of several diverse stimuli, either hepatocellular injury, increased intraductal pressure and obstruction, inflammatory disease of the ducts, or expanding lesions compressing the parenchyma and the ducts. There is much experimental and clinical evidence that supports both sides of the argument. If you ligate several of the intrahepatic ducts but not all, you will produce an alkaline phosphatase elevation before the bilirubin goes up. The proponents of the obstructive theory say this is because alkaline phosphatase is excreted by a more sensitive mechanism, and if you take away the access for excretion it will be the first one damaged. But an interesting thing happens if you not only ligate certain of these ducts but also remove all the liver tissue associated with the ducts. The alkaline phosphatase then does not rise, which would make one wonder if it were not being produced by liver tissue in this obstructed area. Despite all this etiologic uncertainty, however, we know that alkaline phosphatase is a useful test in measuring obstruction, particularly in obstructive jaundice. In addition to rising in obstruction, it often goes up in hepatoma even before the bilirubin rises and it is disproportionately high as compared with the bilirubin. These two situations might tip one off to the possibility of a hepatoma. A seemingly odd thing happened in this man. His alkaline phosphatase was 14.5 B.U. and then 9.7 B.U., decreasing at the time his jaundice was increasing. It sounds a little strange, but I have seen exactly this phenomenon twice within the past year, in patients with hepatoma. I think the adherents of the liver production theory of alkaline phosphatase might have an answer here. They would explain this by saying that in the later stage the liver was so damaged that it was no longer capable of producing much alkaline phosphatase.

Can the ascitic fluid help in the diagnosis? We are not told whether it was bloody and we can assume, therefore, that it was not. Bloody ascites is fairly common in hepatoma but not pathognomonic. It can occasionally occur in uncomplicated cirrhosis. The cytologic studies on the fluid were negative but they give a rather low yield of positives in hepatoma.

This sounds as though I have built a fairly good case for hepatoma, but unfortunately nearly everything I have said about the clinical findings in hepatoma, such as abdominal pain, weight loss, hepatomegaly, ascites, and jaundice apply equally well to metastatic carcinoma of the liver. In metastatic carcinoma you may in addition have symptoms related to the primary focus but not necessarily, so that the two diseases may mimic each other entirely. A similar pathologic process is going on in both diseases, so that liver function tests may be almost exactly the same. Particularly, an elevation of alkaline phosphatase is noted in both primary and metastatic carcinoma. My problem now is to decide between a primary and a secondary carcinoma. Statistically I should say metastatic carcinoma, which is said to be twenty times more common, though I am sure that is not our ex-

perience here. There is not nearly that big a differential at this hospital. Nevertheless, it still is more common. The fact that, with a normal biopsy, this liver apparently was not cirrhotic, would make the odds more in favor of metastatic disease. Had it been a cirrhotic liver I would have been tempted in favor of primary hepatoma. Some people say that you do not get metastases very frequently to the cirrhotic liver. There is controversy on this point that I will not go into. There was a firm cul-de-sac nodule that might or might not represent a peritoneal implant. Had it been called a real rectal shelf we would feel a little more secure. Assuming that it does represent a peritoneal implant, this might be more in favor of a primary outside the liver. The third point that seems to me to favor metastatic malignancy to the liver is the x-ray appearance. There is straightening of the left border of the stomach, which is pushed to the left. This an enlarged left lobe of the liver can do. Unless there is a true lateral film it is hard to tell whether it is also displaced anteriorly or posteriorly. The left lobe of the liver would displace it posteriorly most frequently, whereas retroperitoneal masses, such as adrenal tumors or kidney tumors, would tend to displace it anteriorly. It appears to me to be more anteriorly displaced, but these being oblique films and not true laterals, I must say I cannot be certain on that point. In addition, it looks to me as though I can see the outline of a rounded mass against the lesser curvature of the stomach. This is not quite the contour one would expect of the left lobe of the liver. At this point I really cannot rule out primary hepatoma with left lobe involvement, but I think because of the x-ray changes I just mentioned, because of the cul-de-sac nodule, and because of the statistics in a noncirrhotic liver, that metastatic malignancy is a little more likely.

Now where is the primary? I think we will have to direct our attention first to the stomach in view of these x-rays. As I mentioned, this does not look like a filling defect to me, but carcinomas can be ulcerated, pedunculated, or infiltrating. An infiltrating carcinoma might look something like this with large, irregular folds in the fundus, but the rounded extrinsic mass would not fit too well with this concept. If I am right in interpreting this as a mass we have to think of such things as adrenal carcinoma. This man had no features of Cushing's disease or symptoms of pheochromocytoma but he could have a nonfunctioning type of adrenal tumor. I believe it might produce the displacement of the stomach to the left, but it would be unusual and I doubt if it would produce these mucosal changes. The same thing applies to a renal carcinoma, and in addition, I think there is a scout film that shows normal kidney shadows. What about a pancreatic carcinoma? It can invade the wall of the stomach. Usually, though, its invasion or compression would be lower than this and not in the fundal region of the stomach. It might have helped had we had some history of the type of pain, whether it radiated to the back or was relieved by position, and a blood sugar might have helped. However, for the reasons mentioned above, I believe it is unlikely to be pancreatic carcinoma.

Let us go back to the stomach again and consider another possibility. The lesion that seems to me most likely to produce this appearance is leiomyosarcoma, because of the manner in which it develops. It can grow submucosally entirely within the wall of the stomach, or can grow mainly exogastrically. Here we have what appears more than just extrinsic pressure on the gastric folds. In extrinsic pressure the folds tend to be parallel, tend to be obliterated, and are smaller than this. These seem large folds and somewhat irregular. Leiomyosarcomas can grow submucosally to produce such a picture, may not actually break through the mucosa, and may assume very large sizes extragastrically before they cause any symptoms. I know there are some loose ends, and that I cannot really rule out hepatoma. It remains a good possibility. For the reasons mentioned, though, I believe metastatic malignancy more likely and, of possible primary sources, I think a leiomyosarcoma of the stomach best fits the clinical and x-ray findings.

Clinical Diagnosis. Leiomyosarcoma of stomach with metastases.

DR. YOUNG: Thank you, Dr. Kier. I shall have to modify that normal biopsy

report either now or later I suppose. I do not know what the exact criteria really should be for calling something an inadequate piece of material for study. This piece of tissue submitted as a liver biopsy was constituted almost entirely of liver cells that fall within the normal range. However, there is not a good study of portal spaces present, and I do not think anyone can rule out cirrhosis. Perhaps we should have put this out as an unsatisfactory biopsy.

Are there any further questions, comments, or further diagnoses?

Anatomical Findings. DR. YOUNG: At the time of autopsy the body was that of an emaciated 65 year old white man, who showed jaundice, wasting of the muscles, but otherwise nothing of note except for a protuberant abdomen. When the pleural spaces were opened no fluid was present there. The pericardial sac contained no excess fluid. There was no antemortem clot in the pulmonary artery. When the peritoneal cavity was opened about 5,000 cc. of straw colored fluid was present. Investigation of the lungs showed that each weighed about 550 grams. The bases were fairly firm and somewhat edematous. We suspected before the bronchi were opened that perhaps a pneumonic process was present. However, only fluid was encountered when the passageways were opened. Grossly, there was some firmness to the lungs, particularly in the lower lobes, but we did not suspect what was present microscopically. Throughout the pulmonary vessels and the lymphatics were present tumor emboli. One of the most characteristic things about this tumor was the occurrence of spaces, and in those spaces was a brownish pigment which is bile (Fig. 1). This is a hepatoma and one of the most differentiated forms of hepatoma we have ever seen. Perhaps that constitutes the reason for the slowness of its course, the slow enlargement of his liver, and perhaps it may help Dr. Kier explain some of the laboratory findings, because these liver cells, even though they are in the lung, are functioning as liver cells. Actually they are putting out bile. In the tumor we can find spaces suggesting bile ducts without bile present in them, both in the metastases and in the liver tumor itself. Certainly the tissue is functioning.

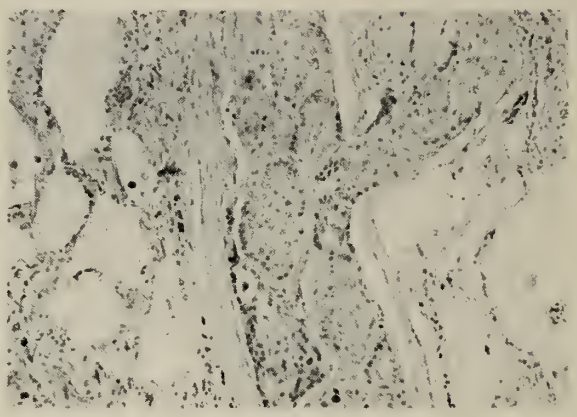


FIG. 1. Metastatic tumor in the lung.

The heart did not disclose anything significant. The spleen weighed 210 grams. It showed the usual congestive splenomegaly. However, the weight of the spleen of 210 grams does not suggest a long standing cirrhosis and congestive splenomegaly. The liver itself was about one and one-half times its usual size. It weighed 2400 grams. The usual liver with cirrhosis and hepatoma would average more than that. It would probably weigh around 3500 grams, and we have seen them considerably larger than that. The cirrhosis was not as marked as we see in many cases. The type was portal. Whether it is a typical Laennec's or some other form I don't think one can say. The nodules in the liver ranged from 0.5 cm. to 5 cm. in diameter. The large size of some of them might suggest a post-necrotic type of basis for the cirrhosis. We have no way to prove or disprove that. It was very difficult in the gross to separate the tumor from nontumor tissue and even microscopically one could find gradual transition between the two types of tissue. Figure 2 from the liver demonstrates the cirrhosis. Even here I think there is considerable inflammatory reaction. A lot of the inflammatory reaction probably came as a result of necrosis of tumor tissue. There was direct invasion of the portal vein with thrombosis of the portal vein no doubt accounting for his ascites, and perhaps that came ahead of the biliary obstruction. Tumor was also present along the common duct. There was all degrees of variation in transition from what appeared to be liver

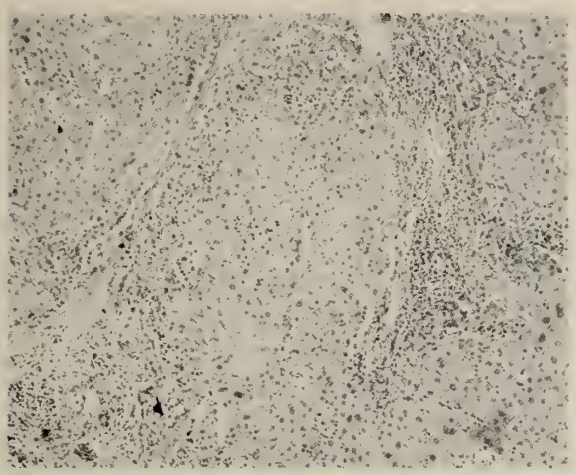


FIG. 2. Liver section showing cirrhosis.

cell cords in the cirrhotic liver to neoplastic liver tissue. In the literature you will find that carcinomas of the liver are divided into, in general, three groups—the hepatomas, the cholangiomas, and a mixed type. Actually it used to be said that the mixed type of hepatic carcinoma was extremely unusual. That has certainly not been true in our experience here. We have a larger number of cholangiocarcinomas than the literature calls for, and by taking numerous sections we have been forced to place into the mixed category quite a few of the carcinomas of the liver. Now this is predominantly a hepatoma, a liver cell type of carcinoma, but you do see the spaces suggesting bile ducts with bile in them.

The pancreas was relatively firm, weighed 75 grams and when sectioned showed a few areas of fat necrosis along the borders. There was no direct involvement of the gastric wall. We did find dilated esophageal varices which extended into the upper portion of the stomach. There were metastases in both adrenals, and lymph nodes.

Final Anatomical Diagnoses. Primary carcinoma of the liver, hepatic cell type.

STATEMENT OF OWNERSHIP, MANAGEMENT AND CIRCULATION
(Act of October 23, 1962; Section 4369, Title 39, United States Code)

Publisher: File two copies of this form with your postmaster

1 DATE OF FILING: September 25,1963
2 TITLE OF PUBLICATION: Journal of the Tennessee Medical Association
3 FREQUENCY OF ISSUE: Monthly
4 LOCATION OF KNOWN OFFICE OF PUBLICATION *(Street, city, county, state, zip code)*: 112 Louise Avenue, Nashville, Davidson, Tennessee -- 37203
5 LOCATION OF THE HEADQUARTERS OR GENERAL BUSINESS OFFICES OF THE PUBLISHERS *(Not printers)*: 112 Louise Avenue, Nashville, Tennessee

6 NAMES AND ADDRESSES OF PUBLISHER, EDITOR, AND MANAGING EDITOR

PUBLISHER *(Name and address)*: Tennessee Medical Association, 112 Louise Avenue, Nashville, Tennessee
EDITOR *(Name and address)*: R. H. Kampmeier, M.D., B-4211, Vanderbilt University Hospital, Nashville, Tennessee
MANAGING EDITOR *(Name and address)*: J. E. Ballentine, 112 Louise Avenue, Nashville, Tennessee

7 OWNER *(If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding 1 percent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a partnership or other unincorporated firm, its name and address, as well as that of each individual must be given.)*

NAME	ADDRESS
Tennessee Medical Association	112 Louise Avenue, Nashville, Tennessee

8 KNOWN BONDHOLDERS, MORTGAGEES, AND OTHER SECURITY HOLDERS OWNING OR HOLDING 1 PERCENT OR MORE OF TOTAL AMOUNT OF BONDS, MORTGAGES OR OTHER SECURITIES *(If there are none, so state)*

NAME	ADDRESS
NONE	

9 Paragraphs 7 and 8 include, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, also the statements in the two paragraphs show the affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner. Names and addresses of individuals who are stockholders of a corporation which itself is a stockholder or holder of bonds, mortgages or other securities of the publishing corporation have been included in paragraphs 7 and 8 when the interests of such individuals are equivalent to 1 percent or more of the total amount of the stock or securities of the publishing corporation.

10 THIS ITEM MUST BE COMPLETED FOR ALL PUBLICATIONS EXCEPT THOSE WHICH DO NOT CARRY ADVERTISING OTHER THAN THE PUBLISHER'S OWN AND WHICH ARE NAMED IN SECTIONS 132.231, 132.232, AND 132.233, POSTAL MANUAL *(Sections 4355a, 4359b, and 4356 of Title 39, United States Code)*

	AVERAGE NO. COPIES EACH ISSUE DURING PRECEDING 12 MONTHS	SINGLE ISSUE NEAREST TO FILING DATE
A TOTAL NO. COPIES PRINTED *(Net Press Run)* 38,600	3217	September - 3217
B PAID CIRCULATION 1. TO TERM SUBSCRIBERS BY MAIL, CARRIER DELIVERY OR BY OTHER MEANS	2924	2924
2. SALES THROUGH AGENTS, NEWS DEALERS, OR OTHERWISE	11	11
C FREE DISTRIBUTION *(Including samples)* BY MAIL, CARRIER DELIVERY, OR BY OTHER MEANS	276	276
D TOTAL NO. OF COPIES DISTRIBUTED *(Sum of Item B1, B2 and C)*	3200	3200

I certify that the statements made by me above are correct and complete. ▶ *(Signature of editor, publisher, business manager or owner)* J E Ballentine

POD Form 3526 Aug 1963

President's Page



DR. CANNON

With the events of the year just ended ringing in our ears—the successes, the failures, the joys, and the sorrows—climaxed by the most tragic event of all for our Nation—we can best serve and best pay our tributes to all who have labored for our Nation, by continuing unceasingly our own labors in our profession, by our services in our communities, and by loyalties to the principles that made our Nation and our profession great.

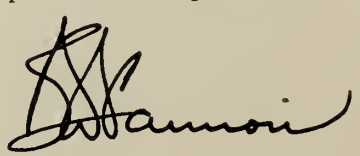
Perhaps 1963 was one of the most eventful and busiest years in the history of the Tennessee Medical Association. We have worked toward solving many of our problems. We have accomplished some things of importance and made progress in others. One of our principal efforts was in expanding the Kerr-Mills Program for the aging and we have seen this program come into realization with cooperation from the Governor and the State Administration. Additions in services and enlargement of the plan has enabled the program to include more people in the near needy aging group and every physician can take pride that his State Medical Association has conducted these efforts to the fullest. We will continue to work toward broadening this program.

The past year brought other accomplishments. The first Statewide Rural Health Conference was presented. A successful Conference on Mental Health was conducted with satisfactory results. We have made progress in the education of our profession on the meaning and substance of the Kerr-Mills Program. Effective testimony was placed in the record of the Committee on Ways and Means of the House of Representatives in opposition to H.R. 3920 (King-Anderson bill). 1963 saw the establishment of a Student Education Fund to aid prospective medical students. These accomplishments represent but a few of the activities of our various divisions and committees.

We are entering a new year, one which will be eventful for the medical profession. To a considerable extent the ability of medical care will be determined by the ability of the physicians to assimilate and utilize the new information which will be added continuously to the already vast amount of knowledge now available. A vote will be forthcoming by the Ways and Means Committee in February or March on the controversial King-Anderson Bill which will decide whether or not Social Security financed medical care will become a reality.

Another area where we must take action is in the education of new physicians. The American Medical Association recently reported that the ratio of doctors per 100,000 population has increased from 137.8 to 146.7 in only three years. There is reason to believe this trend will continue. Our medical schools have gone from 77 to 87 in seventeen years, five more are to be built shortly and another six are in the planning stage.

With the accomplishments made in the year just ended and the tempo of present activities, the Tennessee Medical Association is off to an effective beginning for 1964. We all have a busy and very critical year coming up. It is my hope that all physicians will rededicate themselves to assuming their full responsibility in the efforts which will be required during the coming months to preserve our profession.



President

THE JOURNAL
OF THE
TENNESSEE MEDICAL ASSOCIATION

Published Monthly
Devoted to the Interests of the Medical Profession of Tennessee
Office of Publication, 112 Louise Avenue, Nashville 5, Tenn.

Acceptance for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized July 15, 1932.

Copyright for protection against republication. Journals of the American Medical Association and of other state medical associations may feel free to quote from this Journal whenever they desire merely giving credit to this publication.

Address papers, discussions and scientific matter to R. H. Kampmeier, M.D., Editor, B-4211 Vanderbilt University Hospital, Nashville 12, Tennessee
Address organizational matters to Jack E. Ballentine, Executive Director, 112 Louise Avenue, Nashville 5, Tenn.

R. H. KAMPMEIER, M.D., Editor
Vanderbilt University Hospital, Nashville

EDITORIAL BOARD

ADDISON B. SCOVILLE, JR., M.D.
2104 West End Ave.
Nashville 5, Tennessee

ALBERT WEINSTEIN, M.D.
Medical Arts Building
Nashville 12, Tennessee

COMMITTEE ON SCIENTIFIC WORK AND POST GRADUATE EDUCATION

R. H. KAMPMEIER, M.D., Chairman
W. POWELL HUTCHERSON, M.D., Chattanooga
ROBERT P. MCBURNEY, M.D., Memphis
EUGENE J. SPIOTTA, M.D., Memphis
(Specialty Society Representatives to be named)

JANUARY, 1964

EDITORIAL

CARE OF THE UNCONSCIOUS PATIENT

The possibilities of complete recovery of patients who have been unconscious from trauma or cerebral catastrophe for long periods of time have improved greatly in the last decade. Many of us have had occasion to follow such patients with complete or almost complete recovery following coma. Eckenhoff[1] in a recent paper describes a method of caring for such patients emphasizing the body's normal protective mechanisms and the ways of substituting for them during unconsciousness.

The protective mechanisms of the body during normal sleep closely approximates the unconscious state. Few persons remain motionless during sleep, the majority changing their body position often. The purpose of this is two-fold: (1) for the benefit of circulation, to prevent pooling of blood in dependent portions of the body; and (2) for the benefit of respiration, to counteract the tendency for patchy areas of pulmonary atelectasis to develop.

An additional protection to assure adequacy of ventilation during sleep is the prevention of respiratory obstruction. Few people sleep on their backs for long periods as in this position the lower jaw relaxes, the tongue falls against the posterior pharyngeal wall, partial obstruction of the airway occurs, and snoring results. Occasionally complete obstruction does occur but the normal person never succumbs because his carbon dioxide rises to stimulate the respiratory center. It should be obvious that the safest body position for preserving the airway is the lateral position.

Finally the protective respiratory reflexes are active. In addition, the brain of the sleeping man can receive and interpret peripheral stimuli which make him change his position. These mechanisms protect adequately unless the receptors are blocked by alcohol, drugs or disease.

In an unconscious patient maintenance of good pulmonary function is of paramount importance. The lateral position best maintains the airway but if patency cannot be assured endotracheal airways should be inserted or tracheostomies performed. There are several important gains from the artificial airway: (1) the reduction effected in respiratory dead space thereby improving alveolar ventilation; (2) the relative ease with which respiratory secretions can be removed; and (3) the artificial ventilation, if required, can be carried on more easily. Sterile catheters must always be used for aspiration of tracheostomies and airways and the inspired air should be warmed and humidified. Finally, turning the patient hourly is important and this should be accompanied by gentle back slapping to facilitate expulsion of secretions.

The adequacy of the circulation should be monitored constantly during coma. Blood pressure and pulse readings should be recorded frequently and blood or plasma used for the treatment of shock. Adequate fluids are essential, the quantities being dependent on the volume of urinary output. Daily

[1]Eckenhoff, J. E.: The Care of the Unconscious Patient, J.A.M.A. 186:541, 1963.

checks on adequacy of the circulation are also afforded by determinations of hemoglobin and the hematocrit.

Body metabolism is directly related to body temperature. If fever occurs, oxygen utilization and demands for blood flow increase. Hyperthermia should be prevented by the use of cooling blankets or other appropriate measures. Brain damage after trauma can be minimized by lowering body temperature to 86 to 88 F. Although this is a common technique in the treatment of trauma and cerebral aneurysm, it is only recently receiving trial in the treatment of strokes per se.

There are a variety of less common but just as essential considerations. These include an indwelling catheter, careful skin care, protection of the eyes and good oral hygiene. All will help in providing the best care for the unconscious patient.

Eckenhoff emphasizes that proper care of the unconscious patient requires limitation of the body's own protective devices. The basic attempts are first to maintain the cerebral blood flow adequate in supply and content with an appropriately controlled temperature, and second to protect the remainder of the body from within and without.

Attention to small details, careful observation and thoughtful patient care may mean the difference between life and death or paralysis and recovery in the unconscious patient.

A. B. S.

★

HOUSING FOR THE AGED IN DENMARK

The Tennessee Medical Association has been invited, along with organizations of other states, to take part in an Institute on Long-Term Care Facilities in Atlanta. This is sponsored by the American Medical Association, the American Hospital Association and the American Nursing Home Association. "Guides for Medical Care in Nursing Homes and Related Facilities" were approved by the governing bodies of those three organizations in 1960.[1] Under the section on *Homes for Personal Care and Homes for the Aged* appears the following: "The maintenance of good mental and physical health is dependent on supervised physical activity and mental exercise and stimulation. Preventive and rehabilitative programs to this end should be the responsibility of the administration in this type of home. If patients are up and about, every effort should be made to keep them ambulatory, through proper diet, preventive exercises, preventing accidents, interesting and stimulating activities and immediate recognition of any signs of deterioration. . . ."

The announcement of the Institute suggested to me there might be interest in how the problem of adequate housing for the aged is met elsewhere.

Attendance at the Sixth International Congress of Gerontology this past August gave me opportunity to learn something of the socialism which has been long established in the Scandinavian countries.

The basic policy for housing for the aged in Denmark was spelled out in the *Old-Age Assistance Act of April 1891.* Before this time the needy aged fell under the provisions of the Poor Law, and thus the Act clearly separated the needy aged from the paupers. Its purpose was to provide the elderly with financial assistance to enable them to remain in their own home. If this was impracticable the aged were to be maintained in *special old people's homes* reserved for them and forbidding the admission of paupers and the mentally affected. Though changes were made in passing years, the basic philosophy of "a non-contributory scheme financed entirely from public funds" and covering the "entire population," remain unchanged. Also basic is the provision of housing or *special old people's homes.* In 1963 for a married couple both over age 67, this pension was about $225.00 per year and for a single person, one of a couple not eligible (under age 67), it was about $150 per year.

This flat rate pension for all persons is paid toward housing. If the aged couple's income is below about $590.00 per year they are entitled to an additional *income-related old-age pension.* The full rate of such a pension is about $985.00 per year. The State Government pays the *flat-rate* pension and

[1]Copies of this may be obtained from the American Medical Association, Chicago.

two-thirds of other expenses. Local authorities pay a proportion of the cost and absorb any deficit on an old people's home. Taxpayers pay a 1½% to cover disability and old-age pensions—it is *not* an insurance contribution.

Admission to an old people's home is *voluntary* and by application. In 1962, almost 800 old people's homes were in existence, 200 being modern and built between 1955 and 1962. In 1955, 58% of the then 592 homes had been built within the previous 25 years. (Of these, 17 were in Copenhagen or its suburbs, 164 in provincial towns and 411 in rural areas. For oldsters who prefer to remain in their home, home-nursing and home-helper services are available. An increasing number of nursing homes are being built for the disabled and bedridden—increasing needs are anticipated.

Three modern old people's homes were visited—one opened two years before, one six years before and one eleven years before. All were in villages, built of brick with one and two story wings, with large well kept lawns and landscape gardening; houses of the village were adjacent or partially surrounding the grounds, thus keeping the oldsters in most instances as neighbors to friends or families. One had accommodations for 14 persons and a nursing annex of 30 beds; another accommodated 46 persons (32 single rooms and 7 double rooms) with a nursing annex of 10 beds and was supported by 3 municipal councils; the third had accommodations for 22 persons.

The attractiveness of these homes depends on several features. The rooms provide for 30 to 49 square meters of space per person. They are light with large windows, and each with a lavatory with running water. Except for the single bed, which is adjustable into a raised hospital type of bed, the person brings in his own furniture and of the quantity desired. The own desk, dresser, table, book-case, lamps, family and other pictures, bric-a-brac, curtains, rugs, rockers, even a small piano in one room, etc., leave no atmosphere of an institution or a hospital. Plants, bird cage or a cat, and even a dog, seem to give these people a sense of home. A kitchen on each floor having individual lockers for dishes and the "makings," permit each to make his own tea or coffee and to entertain friends and relatives from the village. Sun rooms, common dining room, and workshops for hobbies, permit activities in addition to visiting in the village. There is no separation of the sexes and mixed groups of enthusiastic card players were observed. The nursing home sections are obviously quite bare and similar to our two or four bed hospital rooms with standard hospital equipment. The per capita cost of the ambulant person is some $3.50 per day and for the bedridden an additional $1.25 or so. Those who have an income above the basic pension or receive an income-related pension contribute modestly to the cost of living in the old people's home. (Within Copenhagen 6000 low rental flats have been made available, 80% designed for single occupancy. These are similar to the housing being provided in some of the municipalities in the United States.)

In a visit to Malmo, Sweden, old people's homes were also visited in a couple of locations. The general set-up of these was similar to that described for Denmark, though the basic socialistic program differs somewhat.

Since the emphasis in "old age legislation" in the United States is mainly of the King-Anderson type there may be interest in reading of an area of providing for the aged which has not advanced very far in this country. Other than providing for low-rent housing for the aged in some of our larger municipalities, little has been done to provide for livable quarters for the aged for the few years they may have after they cannot carry on in their own home for one reason or another, and before they need to go either to a nursing home or a mental hospital.

The frustrations and anxieties of loneliness, the lack of regular meals and adequate food, the nursing care for minor ailments, and the lack of exercise, which are a part of the life of many of our country's aged have connotations in physical and mental health not far behind prescriptions and doctors' fees which so intrigue our politicians.

R. H. K.

DEATHS

Dr. J. Atlee Flora, 71, Kingsport, died November 30th at Holston Valley Community Hospital.

Dr. W. Rufus Smith, 59, formerly of Knoxville, died December 10th at Pensacola, Florida.

Dr. E. E. Edwards, 48, McKenzie, died December 17th in a Nashville hospital.

Dr. P. J. Flippin, 45, Decherd, died December 11th at his home.

Dr. Albert C. Broyles, 75, Dayton, died December 2nd in a Chattanooga hospital after a brief illness.

Dr. William E. McGaha, 75, Newport, died December 2nd in a Knoxville hospital.

Dr. Charles L. Goodrich, 85, Fayetteville, died November 19th in Lincoln County Hospital.

Dr. P. C. Tipton, 79, Dyersburg, died November 14th.

Dr. R. B. T. Sweany, 80, Manchester, formerly of Nashville, died December 18th.

Dr. Frank Fowler Harris, Sr., 63, Chattanooga, died December 8th.

PROGRAMS AND NEWS OF MEDICAL SOCIETIES

Knoxville Academy of Medicine

Members of the Society heard the address of retiring president, Dr. Richard C. Sexton, at the meeting of the Knoxville Academy of Medicine on November 10th. His subject was "Imagery and Communication in Medicine." Dr. John H. Burkhart assumed the presidency for 1964.

In the election of officers, Dr. John O. Kennedy was named President-elect to succeed Dr. Burkhart in December, 1964. Others elected were: Dr. Perry Williamson, vice-president; Dr. R. J. Leffler, secretary-treasurer; Dr. R. J. Brimi, Dr. W. A. Nelson and Dr. R. B. Willingham, executive committeemen. Drs. W. H. Benedict, Jacob T. Bradsher, Harry Jenkins and John Saffold were named delegates to the Tennessee Medical Association.

Committee chairmen presented reports of activities for the information of the membership.

Chattanooga-Hamilton County Medical Society

At the annual business meeting of the Society on December 3rd, Dr. John Higgason was selected for the Society's president in 1965. Dr. Higgason will succeed Dr. Edward T. Newell, Jr. who assumed the office of president for 1964 on January 7th at the annual banquet held at the Chattanooga Golf and Country Club.

Other officers installed at the January meeting were: Dr. C. Robert Clark, re-elected secretary-treasurer; Dr. Van Fletcher, member of the board of censors; Dr. Harold J. Starr, a member of the board of governors. Drs. Jesse L. Williams, James T. Royal, Robert T. Miller, Robert E. Baldwin, W. B. MacGuire, and C. Windom Kimsey, were named delegates to the Tennessee Medical Association.

Memphis-Shelby County Medical Society

The Memphis and Shelby County Medical Society elected new officers at its annual dinner meeting on December 3rd at the Memphis Country Club. Dr. William T. Satterfield assumed the office of president succeeding Dr. Gilbert J. Levy. Dr. Albert J. Grobmyer, Jr. was named president-elect to take office in 1965. Other officers are: Dr. L. W. Diggs, vice-president, Dr. J. Warren Kyle, secretary, and Dr. George Livermore, treasurer.

Nashville Academy of Medicine and Davidson County Medical Society

The Academy's annual dinner meeting for installation of officers occurred on January 14th at the Hermitage Hotel. Dr. Addison B. Scoville assumed the office of president succeeding Dr. Walter L. Diveley. In accepting the office for 1964, Dr. Scoville spoke to the membership on the subject, "The Doctor as a Citizen."

The secretary-treasurer of the Academy is Dr. Carl Gessler, and named to the Board of Directors for three-year terms were Dr. Robert Chalfant and Dr. John Tudor. Dr. James N. Thomasson was chosen president-elect for 1965.

NATIONAL NEWS

The Month in Washington
(From the Washington Office, AMA)

Both sides squared off for a new legislative battle this session of Congress on the issue of financing a medical-hospital plan for the aged through higher social security taxes.

There was no vote on the disputed King-Anderson bill (H.R. 3920) in Congress last year. The House Ways and Means Committee held five of a scheduled nine days of hearings on the bill in November, but broke the hearings off on news of the assassination of President Kennedy. The sessions were scheduled to be concluded in January.

The financial soundness of the administration's bill was challenged by Ways and Means Committee Chairman Wilbur Mills (D., Ark.). He told Administration witnesses that if Congress had approved similar legislation in the past, it apparently now would have to increase the Social Security tax almost 100 per cent to maintain the actuarial balance of the Social Security system.

Mills said the quarrel he has with the proposed increased tax in the bill is that it does not take into account future costs and the effect they would have on the fiscal soundness of the overall Social Security System. He said a bill should not give the impression that the aged can get these services at some cut-rate cost, or that the economy and costs will remain static.

"If that is a realistic assumption, then I do not know what an unreal assumption is," said Mills. If such a program is passed, he continued, Congress must face up to the costs and provide a tax in existing law that will take into account future costs.

If the King-Anderson bill were enacted with a shaky actuarial basis, Mills said, action by some future Congress would be necessary to raise the taxes to support it, and this might be very difficult.

Mills has introduced a bill to increase the regular Social Security tax and the wage base it is levied on so that the system will be financially in order.

HEW Secretary Anthony Celebrezze told the committee that congressional enactment of the Administration's plan for a hospital-medical benefit program financed by higher Social Security taxes is both "necessary and urgent."

Another major development at the hearings was an attack by Sen. Karl Mundt (R., S.D.) on HEW officials for trying to impede the Kerr-Mills program of federal-state aid for the indigent and medically-indigent elderly.

Mundt declared that Kerr-Mills is the victim of a planned program of interference on the part of the Department of HEW, King-Anderson supporters in Congress, and welfare workers and officials at the state and county levels. He suggested the HEW actions ran counter to the intent of Congress and might be illegal.

The president of the American Medical Association told the Committee that the Administration-backed health care for the aged plan would cost the nation's workers twice as much to start as sponsors of the proposal have claimed or would require periodic tax increases to keep it solvent.

Edward R. Annis, M.D., Miami, Florida, surgeon, pointed out that previous testimony disclosed that payroll taxes would have to be increased by 1 percent, half paid by the workers and half by their employers, and the taxable wage base increased to $5,200 to start the program off on a financially sound basis, or periodic tax increases would be required to keep it out of financial trouble.

The King-Anderson bill (H.R. 3920) calls for a one-half per cent payroll tax increase on workers and employers (one-fourth of one percent on each) and an increase in the taxable wage base from the present $4,800 to $5,200 to finance a proposed program of hospitalization, nursing home care and related services to everyone age 65 and over.

Dr. Annis said the King-Anderson bill "would transfer to the federal government at a single stroke the responsibility for the purchase of specified hospital and related benefits for all persons over 65, regardless of their desires or their economic need."

"There is no justification," he said, "for the use of tax funds collected from workers

at the low end of the income scale to pay these expenses for the entire elderly population, including the self-supporting and the wealthy."

Dr. Annis declared that actuaries of the Department of Health, Education and Welfare had previously acknowledged in a study of the King-Anderson bill that "periodic tax increases will be necessary in a rising economy to keep the program solvent."

The AMA also pointed out that it has been estimated that it would cost $35 billion for King-Anderson benefits for the aged who would be immediately eligible but would have paid little or nothing under the program. "This is the amount," the AMA said, "that would be necessary to finance health care for the rest of their lives for all those eligible to take part in the program at its start." This figure was confirmed by HEW officials in Monday's testimony.

Norman A. Welch, M.D., Boston, president-elect of the AMA, appeared with Dr. Annis to review "the remarkable contribution toward the financing of health care for the aged that is being made by private health insurance and prepayment plans "which now protect more than 60 per cent of the entire population over 65."

Dr. Annis said, "for years, the American people have been bombarded by such statements as the monthly income of the great majority of the aged is little more than a social security check. Yet, the government's own figures show that the annual income of persons over 65 is $35 billion. Only one-third of this comes from Social Security payments."

"The aged who need help in meeting medical bills are receiving it," Dr. Annis said. He pointed out these developments:

1. "Government figures show that more than $1.5 billion in public funds was paid out for this purpose in 1961."

2. More than 10 million persons over 65—over 60 per cent of all the aged—are protected by some form of health insurance.

3. The Kerr-Mills program, including Medical Assistance for the Aged and Old Age Assistance, paid out more than half a billion dollars for health care of the aged in fiscal 1962.

Dr. Annis asserted that King-Anderson type legislation "would impose a permanent pattern of tax-paid, government-regulated health care—a pattern inherently subject to inevitable expansion."

"Such expansion," he said, "would lead to a deterioration of the quality of health care—disrupting the voluntary relationship between the patient and his physician and imposing centralized direction which would frustrate the striving for professional excellence. It would bring about a decline of professionalism and create a form of medicine strange to these shores. It would result in a loss of able entrants into the health care field because of government controls over medicine. We believe that this legislation is not only unnecessary but also dangerous to our American system of medical care."

MEDICAL NEWS IN TENNESSEE

University of Tennessee College of Medicine

The University of Tennessee's Board of Trustees has approved the establishment of a graduate and postgraduate medical training center at the University Hospital in Knoxville. The purpose of the new training center is to provide specialized training for doctors, and will in no way change the operations either of the hospital or of the medical units at Memphis. A hospital director will be appointed to coordinate the new program.

The University's President Andrew D. Holt has named a four-man special committee to aid in the selection of a director for the University Research Center and Hospital. The four, Drs. Robert B. Wood, Felix G. Line, A. W. Diddle and Frank London, will canvas the country to select the best qualified man for the new position. The new director will be in charge of all phases of patient care and of the new programs of specialized medical training on the graduate and postgraduate levels. He will also supervise clinical research at the hospital.

More than $3 million, a record amount, was spent on research by the Medical Units in 1963. Funds from local, state and federal grants, other public and private agencies and university appropriations were used in investigations ranging from the problems in cancer and heart disease to basic research in finding out how the body functions in its normal state. All the medical specialties in the University are involved in research and nearly every aspect of the human body is under investigation in one phase or another. Total research in all of the departments and divisions for the fiscal year totaled more than $8 million.

★

Diplomas and certificates were awarded to 82 on December 15th. Dr. Robert A. Kimbrough of Chicago, medical director of the American College of Obstetricians and Gynecologists, delivered the commencement address. His topic was "The Physician in Fiction." Dr. Andrew Holt, president of the University, awarded diplomas and certificates to 40 doctors of medicine, 27 doctors of dental surgery, 2 masters of science in pedodontics, 2 doctors of philosophy, 2 masters of science, one bachelor of arts, 3 bachelors of science and 5 roentgen ray technicians.

★

A research scientist who has spent years studying cancer and possible control drugs is a new staff member of St. Jude Hospital and the Medical Units. Dr. Leon J. Journey, formerly senior cancer research scientist at Roswell Park Memorial Institute, will work with Dr. Milton N. Goldstein in the hospital's laboratory of cell biology and as assistant professor of anatomy at the medical units.

★

St. Jude Hospital—Memphis

Dr. J. J. Trentin, professor and head of the Division of Experimental Biology at Baylor University College of Medicine in Houston, discussed the production of cancer in experimental animals by certain viruses that infect the human nose and throat, at the first of St. Jude Hospital's winter research seminar series on December 6th. Eleven physicians and scientists will participate in the seminar series which will conclude February 28th with a talk by Andrew E. Lorincz, associate professor of pediatrics at the University of Florida. Physicians, research scientists and students of biology and medicine throughout the Mid-South are invited to attend.

★

Dr. Paul E. Came, formerly with Hahnemann Medical College's department of microbiology in Philadelphia, has joined the St. Jude Hospital. Dr. Came, whose research work includes reaction and resistance of animals to viruses, will work in the virology laboratory with Dr. Allan Granoff. The research laboratory is primarily concerned with principles governing multiplication of viruses in cells and the biochemistry of cells infected by viruses.

Vanderbilt University School of Medicine

Technologists from some 25 hospitals in Middle Tennessee and Southern Kentucky spent a day at Vanderbilt Medical Center on November 16th reviewing the latest information on blood banking techniques. The workshop, sponsored by Vanderbilt Blood Bank and Pfizer-Knickerbocker Laboratories, concentrated on giving the technologists practical experience in blood matching and antibody detection, and emphasized the importance of the technologists being able to make accurate and speedy detection of all antibodies.

★

The legal and medical professions joined in a program on November 22nd at Vanderbilt University Law School. The seminar, most recent in a series of programs for medical and legal education in Tennessee, explored the medical-legal aspects of the effect of stress and strain on the cardiovascular system. Dr. Fred Goldner, Jr., director of the cardiac work evaluation unit at Vanderbilt, was Chairman of the program.

★

Approximately 200 Tennessee high school students toured research laboratories at

Vanderbilt University School of Medicine and Meharry Medical College on December 4th in the fifth annual "Operation Heartbeat—Science Explorers Day." The program is designed to stimulate interest of science students in pursuing medical careers, and the tours are presented by the Middle Tennessee Heart Association in cooperation with Vanderbilt and Meharry.

★

The U. S. Public Health Service has awarded a five-year grant for research on the physiology of the newborn. Dr. Mildred Stahlman, assistant professor of pediatrics, will receive $18,120 during the first year of the program, with the amounts during the remaining four years to be set. Dr. Stahlman's specific research interest is hyaline membrane disease.

Two Scientists Receive Grants

Two Tennessee scientists have been awarded grants for research in muscular dystrophy from the Muscular Dystrophy Associations of America, Inc. Dr. Jane H. Park of Vanderbilt University School of Medicine and Dr. Harris L. Smith of St. Jude Hospital, Memphis are the recipients of the awards. Dr. Park received $10,746 to continue research on crystaline enzymes from muscle. Dr. Smith received $9,406 for the continuation of broad clinical and histochemical studies in muscular dystrophy.

Dedication Ceremonies for Three Medical Facilities

Decatur County's new $185,000, 22-bed General Hospital, was dedicated on December 1st with a featured address by Dr. Jack Davies of the Vanderbilt University School of Medicine teaching staff. Dedication of Warren County's new general hospital also occurred on December 1st. Congressman Joe L. Evins delivered the dedicatory address.

Dedication ceremonies for the new half-million dollar Memphis Speech and Hearing Center Building were held on November 17th. The center is Memphis headquarters for the rehabilitation of patients with speech or hearing defects, much of which is done without charge.

PERSONAL NEWS

Dr. Robert Allen, Cleveland, has been announced as a diplomate of the American Board of Internal Medicine.

Dr. Merritt B. Shobe, Kingsport, is in Nigeria participating in the Orthopedics Overseas Project of MEDICO. His associates, **Dr. Robert T. Strang** and **Dr. Joseph K. Maloy** will also participate in this project.

Dr. Hammond H. Pride, Knoxville, has been re-elected chief of staff of Children's Hospital. **Dr. John Kesterson** was elected vice chief of staff and **Dr. Norma B. Walker,** secretary.

Three Tennessee pediatricians have been named to committees of the American Academy of Pediatrics. **Dr. Joseph A. Little** of Nashville has been re-appointed to a three-year term on the Committee on Fetus and Newborn. **Dr. Michael J. Sweeney,** Memphis, will serve a three-year term on the Committee on Nutrition, and **Dr. Lloyd V. Crawford,** Memphis, will serve a three-year term on the Section on Allergy.

Dr. H. K. Turley, Memphis, was chosen president-elect of the Baptist Hospital medical staff.

Dr. R. H. Kampmeier, Nashville, has been chosen president-elect of the Southern Medical Association. He will assume the presidency at the annual meeting of the Association to be held in Memphis, Tennessee, November 16-19, 1964.

Dr. Crawford W. Adams, Nashville, participated on two panels at the interum American Medical Association session in Portland, Oregon.

Dr. Daniel Davis, Knoxville, has been named chief of East Tennessee Baptist Hospital medical staff. Other appointments were: **Dr. C. S. Carlson,** vice chief of staff; **Dr. Glenn Kennedy,** secretary; **Dr. Raymond Bunn,** chief of general practice department; **Dr. John W. Avera,** chief of medical department; **Dr. John Kesterson,** chief of surgical department; and **Dr. E. E. Shouse,** chief of obstetrics and gynecology department.

Dr. J. M. Frere, Knoxville, spoke on "Care of the Heart" to members of the East Knoxville Kiwanis Club on November 18th.

Dr. Wilford H. Gragg, Jr., Memphis, is the new president of the medical staff of St. Joseph Hospital. **Dr. Earl Baker** has been named president-elect to take office in 1965 and **Dr. Sam B. Anderson, Jr.** has been elected secretary.

Dr. Julian Williams, Kinsgport, has been named chairman of the Kingsport Mental Health Committee.

Dr. Felix G. Line, Knoxville, has been re-elected chief of staff at University Hospital.

Dr. Glenn M. Clark, Memphis, addressed the Methodist Hospital Auxiliary at a recent meeting. His subject was "Rheumatoid Arthritis."

Dr. James N. Etteldorf, Memphis, has been re-elected chief of staff of LeBonheur Children's Hospital. **Dr. E. D. Bell, Jr.** was elected vice

president; **Dr. Robert G. Allen,** chief of surgery; and **Dr. James S. Brown** is the new chief of medicine.

Dr. John B. Turner, Springfield, has been selected to lead the 1964 March of Dimes campaign in Robertson County.

Dr. Bruce Powers, Knoxville, has been elected chief of the medical staff at Fort Sanders Presbyterian Hospital. Other officers elected were: **Dr. Edward Tauxe,** vice chief of staff; and **Dr. R. H. Duncan,** secretary-treasurer.

Dr. J. C. Gaw, McMinnville, will serve as chief of staff of the new Warren County General Hospital. Other staff officers are: **Dr. J. F. Fisher,** secretary; **Dr. James L. Moore,** chief of surgery; **Dr. C. E. Peery, Jr.,** chief of medicine; **Dr. J. E. Phillips,** chief of obstetrics.

Dr. William Scott has assumed the office of president of the Nashville Surgical Society.

Dr. Dale Teague, Knoxville, presented a paper on ophthalmology before the meeting of International College of Surgeons at White Sulphur Springs.

Dr. Richard Obenour, Knoxville, participated on a panel entitled "The Relationship Between Medicine and Religion in Caring for the Hospitalized and Sick" before the East Knoxville Kiwanis Club.

Dr. Robert E. Clendenin has joined the staff of the Doctors' Clinic in Union City.

Dr. George W. Shelton, Chattanooga, was a recent guest speaker at a meeting of the Chattanooga Chapter of Medical Assistants. His subject was "Orthopaedic Appliances."

Dr. Dan Thomas, who has not missed a Knoxville Optimist Club meeting in ten years, was honored recently by his fellow club members.

Drs. E. Perry Crump and **Robert M. Foote** of Nashville, and **Dr. A. Roy Tyrer** of Memphis have been appointed members of Tennessee's new advisory committee on retardation.

Dr. Fred S. Booth has joined **Dr. John S. Burrell** in the practice of medicine and surgery in Lake City.

Dr. R. B. Wood, Knoxville, was guest speaker at a recent meeting of the Technical Society of Knoxville. His subject was: "Is Your Heart in the Right Place?"

Dr. John H. Burkhart, Knoxville, spoke at a capping ceremony for 39 area high school students who completed a 30-hour course in the Red Cross Junior Aid program on December 16th.

Two Memphis physicians were elected to offices in the Southern Medical Association's Section of Otolaryngology at the recent meeting in New Orleans. **Dr. Sam H. Sanders** was named chairman-elect and **Dr. E. W. Cocke, Jr.,** vice-chairman.

Dr. Hope Maddox was elected president of the Memphis Branch Southeastern Section of the American Urological Association. Others elected were: **Dr. Gordon Mathes,** president-elect; and **Dr. Albert Biggs,** secretary-treasurer.

Dr. Lloyd V. Crawford has been elected president of the Memphis and Shelby County Pediatric Society. **Dr. Sheldon B. Korones** was elected vice president and **Dr. Jack Segal** was named secretary-treasurer.

Dr. Wade N. Nowlin, formerly of Memphis, has opened his office for the practice of medicine in Bristol.

Dr. Robert H. Elder, Cedar Hill, has been elected chief of staff of Jesse Holman Jones Hospital. Others elected are **Dr. W. P. Stone,** vice chief of staff, and **Dr. J. R. Quarles,** secretary.

ANNOUNCEMENTS

AMA President Urges Support of The World Medical Association at AMA Clinical Session

With the words "This is your international organization of private medicine as distinguished from the inter-governmental World Health Organization" Dr. Edward R. Annis, President of the American Medical Association, appealed to members of the American medical profession to support The World Medical Association through active membership in The World Medical Association, United States Committee.

Speaking before the AMA House of Delegates during the AMA Clinical Session in Portland, Oregon, Dr. Annis, who is President of The World Medical Association, told of how The World Medical Association is the only private organization officially recognized to represent private medicine on an international level. "Through this representation" he stated, "our own free practice of medicine here in the United States is protected".

United States Committee annual membership dues of $10 are tax-exempt. Dues should be made payable and sent to: The World Medical Association, United States Committee, Inc., 10 Columbus Circle, New York, N.Y. 10019

Journalism Awards

CHICAGO—The AMA has announced a $5,000 medical journalism awards program "to recognize journalism that contributes to a better public understanding of medicine and health in the United States." Awards of $1,000 each will be presented for outstanding reporting on health and medicine in five categories—newspapers, magazines, radio, television, and in newspaper editorial writing, said F. J. L. Blasingame, M.D., executive vice president of the AMA.

The awards are intended for recognition of outstanding reporting of the scientific and clinical aspects of medicine, Dr. Blasingame said. Awards will be presented for the first time in 1965, based on work published or broadcast during the calendar year of 1964.

Entries will be judged on a basis of accuracy, significance, quality, public interest and impact.

Entries will be judged by the 1964 Medical Journalism Awards Committee, which will include outstanding members of the publishing industry, radio and television industry and the medical profession, he said.

Entries may be sent to the 1964 Medical Journalism Awards Committee, American Medical Association, 535 N. Dearborn St., Chicago, Ill. Deadline is Feb. 1, 1965, although entries may be submitted at any time prior to that date.

Calendar of Meetings, 1964

State

January 22-23 —"Hematologic Workshop on Common Problems in Anemia" —Vanderbilt University School of Medicine, Nashville

February 20 —"Newer Experiences in Gastroenterology," Vanderbilt University School of Medicine, Nashville

April 12-15 —Tennessee Medical Association Annual Meeting, Peabody Hotel, Memphis

Regional

February 11-14 —Mid-South Medical Assembly, Peabody Hotel, Memphis

February 12-16 —American College of Cardiology, Roosevelt Hotel, New Orleans

Feb. 29-March 6—American College of Allergists, Americana Hotel, Bal Harbour, Florida

Feb. 29-March 5—International Academy of Proctology, Deauville Hotel, Miami Beach, Florida

March 2-5 —New Orleans Graduate Medical Assembly, Roosevelt Hotel, New Orleans

March 16-19 —American College of Surgeons, Roosevelt & Jung Hotels, Louisiana State University and Tulane University, New Orleans

April 1-3 —American Surgical Association, Homestead, Hot Springs, Va.

April 27-28 —Society of Head & Neck Surgeons, Peabody Hotel, Memphis

National

January 18-23 —American Academy of Orthopaedic Surgeons, Palmer House, Chicago

January 22-25 —Neurosurgical Society of America, Wigwam Hotel, Phoenix, Arizona

February 7-12 —American Academy of Allergy, San Francisco

February 8-11 —Congress on Medical Education, Palmer House, Chicago

March 15-19 —International Anesthesia Research Society, Flamingo Hotel, Las Vegas

March 25 —Symposium on Kidney Disease, Sheraton-Chicago Hotel, Chicago

April 3-5 —American Association of Pathologists and Biologists, Drake Hotel, Chicago

April 11-16 —American Academy of General Practice, Convention Hall, Atlantic City, N. J.

Mid-South Postgraduate Medical Assembly

The seventy-fifth annual Mid-South Postgraduate Medical Assembly will be held at Hotel Peabody, Memphis, February 11-14. Eighteen outstanding guest speakers will present topics of interest in Dermatology, General Practice, General Surgery, Internal Medicine, Obstetrics and Gynecology, Pathology, Neurosurgery, Orthopaedic Surgery, Pediatrics, Plastic Surgery, Radiology, Rheumatology, and Urology.

In addition to a Clinicopathologic Conference, there will be three round-table luncheons, six scientific exhibits and seventy technical exhibits. A handicap golf tournament will be a highlight of the planned entertainment during the Assembly. For further details, contact Mr. Les Adams, Executive Director, 774 Adams Avenue, Memphis, Tennessee.

Medical College of Georgia Department of Continuing Education

A five day course, "Hypertension and its Complications," dealing with the various causes of high blood pressure and its consequences will be presented by the Department of Continuing Education of the Medical College of Georgia and the American College of Physicians, February 10-14. The fee for American College of Physician members is $60, for non-members, $100. For information and application blanks, contact Edward C. Rosenow, Jr., M.D., Executive Director, American College of Physicians, 4200 Pine Street, Philadelphia, Pennsylvania 19104.

"Obstetric Problems in Private Practice," an intensive short course to be held at the Medical College of Georgia, February 18-20, is designed especially for physicians in general practice who are interested in improving their skills in the private practice of obstetrics. Each course is acceptable for 18 hours credit by the American Academy of General Practice. Application can be made by contacting Dr. Claude-Starr Wright, Director, Department of Continuing Education, Medical College of Georgia, Augusta, Georgia.

The West Virginia Academy of Ophthalmology & Otolaryngology

The West Virginia Academy of Ophthalmology and Otolaryngology will hold its seventeenth annual meeting at the Greenbrier Hotel, White Sulphur Springs, West Virginia on April 15-18, 1964. An outstanding scientific program is planned. A registration fee of $35 for associate members will cover all social and scientific sessions. For additional information, please contact the secretary, Dr. Worthy W. McKinney, Professional Park, Beckley, West Virginia.

New Orleans Assembly Announces March Meeting

The New Orleans Graduate Medical Assembly will meet for its 27th annual session March 2-5, 1964, with headquarters at the Roosevelt Hotel. Nineteen guest speakers will participate. The program will include 55 informative discussions on topics of current medical interest, in addition to clinicopathologic conferences, symposia, medical motion pictures, round-table luncheons, and technical exhibits.

Following the meeting in New Orleans, arrangements have been made for a clinical tour to Europe leaving via air on March 7. The itinerary includes visits to Lisbon, Madrid, Rome, Vienna, Berlin, and Paris with the return set for March 28. Details of the New Orleans meeting and the tour may be obtained from the office of the Assembly, 1430 Tulane Avenue, New Orleans, La. 70112.

Postgraduate Course in Gastroenterology Vanderbilt University School of Medicine

The Department of Medicine of Vanderbilt University School of Medicine will conduct a one-day Postgraduate Day on "Newer Experiences in Gastroenterology" on Thursday, February 20. This program is designed to present a survey of current opinion concerning selected clinical situations which involve the digestive system. Some of the topics represent circumstances which confront the physician with some frequency, such as hiatal hernia, pancreatitis, benign and malignant tumors of the large bowel, defects of intestinal absorption or bleeding and ascites as they complicate liver disease. Other topics present newer or re-emphasize older diagnostic precepts such as the use of radioisotopes, endoscopic and biopsy techniques and improved x-ray examination procedures. Still other topics deal with accepted surgical techniques for gastroduodenal diseases and some of the usual and unusual course of events which follow such surgical procedures. The muchly publicized and somewhat controversial procedure of gastric freezing for duodenal ulcer is to be discussed as is also the present status of chemotherapeutic agents now being used in malignant disease of the digestive system.

The presentations will be full enough to adequately introduce the subjects but restricted enough to leave time for discussion of the presented material by the audience. To this end questions and audience participation are sincerely invited.

This program contains material of interest to the practitioner, the surgeon and the internist.

The course is acceptable for Category I credit by the American Academy of General Practice. Tuition is $15.00, which includes the luncheon. For further information address the Division of Continuing Education, Vanderbilt University School of Medicine.

Institute on Long-Term Care Facilities

To help provide information about planning and design of long-term care facilities and their relationship to improved patient care the American Medical Association is cooperating with the American Hospital Association in sponsoring an Institute on Long-Term Care Facilities at the Atlanta Biltmore Hotel in Atlanta, February 24-26, 1964. This Institute will feature a discussion on techniques of functional and architectural programming of facilities which are intended to serve long-term patients.

Annual Congress on Medical Education

The 60th Annual Congress on Medical Education, sponsored by the Council on Medical Education and Hospitals of the American Medical Association, the Advisory Board for Medical Specialties, and the Federation of State Medical Boards of the United States, will be held February 8-11, at the Palmer House in Chicago. Reservations should be made directly with the hotel and reference should be made to the Annual Congress on Medical Education. A block of rooms has been set aside for guests attending the Congress.

OFFICERS OF THE TENNESSEE MEDICAL ASSOCIATION, 1963-64

President—Bland W. Cannon, M.D., Suite 402-B, 20 So. Dudley Street, Memphis
President-Elect—R. H. Kampmeier, M.D., Vanderbilt Hospital, Nashville
Vice-President—Joseph L. Raulston, M.D., 5338 Broadway, N.E., Knoxville
Vice-President—Charles A. Trahern, M.D., 1724 Memorial Drive, Clarksville
Vice-President—Henry B. Gotten, M.D., 1412 Madison Avenue, Memphis
Secretary—John H. Burkhart, M.D., 3000 No. Broadway, Knoxville
Executive Director—Mr. J. E. Ballentine, 112 Louise Avenue, Nashville 5

BOARD OF TRUSTEES

*Robert M. Finks, M.D., Chairman and Treasurer (1964) 2122 West End Ave., Nashville
*J. Malcolm Aste, M.D., (1964) 188 South Bellevue, Memphis
John H. Burkhart, M.D., (1964) 3000 No. Broadway, Knoxville
Bland W. Cannon, M.D., (1965) 402-B, 20 South Dudley Street, Memphis
*E. L. Caudill, Jr., M.D., (1966) 114 East H Street, Elizabethton
C. D. Hawkes, M.D., (1966) 220 So. Claybrook Street, Memphis
G. Baker Hubbard, M.D., (1966) Jackson Clinic, Jackson
*Joseph W. Johnson, Jr., M.D., (1965) Interstate Building, Chattanooga
*R. H. Kampmeier, M.D., (1966) Vanderbilt Hospital, Nashville
K. M. Kressenberg, M.D., (1966) 215 Cedar Lane, Pulaski
William J. Sheridan, M.D., (1964) Medical Arts Building, Chattanooga
*Executive Committee of Board of Trustees.

SPEAKER OF THE HOUSE

J. Malcolm Aste, M.D., 188 South Bellevue, Memphis
Vice-Speaker—Tom E. Nesbitt, M.D., 1921 Hayes Street, Nashville

COUNCILORS

First District—J. O. Hale, M.D., 401 North Boone St., Johnson City (1964)
Second District—B. M. Overholt, M.D., 717 Cumberland Avenue, S.W., Knoxville (1965)
Third District—M. F. Langston, M.D., 103 Palisades, Signal Mountain (1964)
Fourth District—Kenneth L. Haile, M.D., 137 W. Second Street, Cookeville (1965)
Fifth District—Coulter S. Young, M.D., Manchester (1964)
Sixth District—Harry T. Moore, Jr., M.D., 326 Mid-State Medical Center, Nashville (1965)
Seventh District—Wm. K. Owen, M.D., Pulaski (1964)
Eighth District—O. M. McCallum, M.D., Henderson (1965)
Ninth District—R. David Taylor, M.D., 620 Main Street, Dyersburg (1964)
Tenth District—Francis H. Cole, M.D., 188 South Bellevue, *Chairman,* Memphis (1965)

DELEGATES TO THE AMA

Alvin J. Ingram, M.D., 869 Madison Avenue, Memphis (1965)
Chas. C. Smeltzer, M.D., 521 W. Cumberland Avenue, Knoxville (1964)
Daugh W. Smith, M.D., 1926 Hayes Street, Nashville (1965)
Alternates:
Julian K. Welch, Jr., M.D., Brownsville (1965)
Wm. J. Sheridan, M.D., Medical Arts Building, Chattanooga (1964)
W. O. Vaughan, M.D., 2103 Hayes Street, Nashville (1965)

PRESIDENTS AND SECRETARIES OF COUNTY MEDICAL SOCIETIES, 1963-64

COUNTY	PRESIDENTS	SECRETARIES
Bedford County	Alfred Farrar, M.D., Shelbyville	W. L. Chambers, M.D., Gunter Building, Shelbyville
Benton-Humphreys County	John H. Overall, M.D., Camden	Hiram C. Capps, M.D., Waverly
Blount County	Homer L. Isbell, M.D., Med. Arts Bldg., Maryville	Oliver K. Agee, M.D., Arcade—Midland Center, Alcoa
Bradley County	Jas. C. Lowe, M.D., 755 Broad Street, N.W., Cleveland	James L. Allen, M.D., Calhoun
Campbell County	M. L. Davis, M.D., Lafollette	Roscoe C. Pryse, M.D., Lafollette
Chattanooga-Hamilton County	M. F. Langston, M.D., 103 Palisades Drive, Signal Mountain	C. Robert Clark, M.D., 210 Med. Arts Building Chattanooga Mrs. Flo Richardson, 109 Medical Arts Building, Chattanooga—Exec. Secy.
Cocke County	W. E. McGaha, M.D., 302 E. Main St., Newport	R. B. McMahan, M.D., 501 E. Main St., Newport
Coffee County	Edwin E. Gray, Jr., M.D., 108 W. Blackwell, Tullahoma	John A. Shields, M.D., Manchester
Consolidated Medical Assembly of West Tennessee	Eugene C. Crafton, M.D., Trenton	George B. Wyatt, M.D., 686 W. Forest Avenue, Jackson
Cumberland County	Arthur K. Husband, M.D., Crossville	Jas. T. Callis, M.D., Crossville
Nashville Academy of Medicine Davidson County	Walter L. Diveley, M.D., Medical Arts Building, Nashville	Tom E. Nesbitt, M.D., 1921 Hayes Street, Nashville Mr. Jack Drury, 112 Louise Avenue, Nashville—Executive Secretary
Dickson County	L. C. Jackson, M.D., Dickson	James T. Jackson, M.D., Dickson
Fentress County	Guy C. Pinkley, M.D., Jamestown	B. F. Allred, M.D., Jamestown
Franklin County	A. Reynolds Fite, M.D., Winchester	George L. Smith, M.D., Winchester
Giles County	J. U. Speer, M.D., 522 Jefferson, Pulaski	K. M. Kressenberg, M.D., 215 Cedar Lane, Pulaski
Greene County	W. L. McGuffin, M.D., 104 N. College, Greeneville	James R. McKinney, M.D., Takoma Hospital, Greeneville
Hamblen County	T. J. Hill, M.D., Citizens Bank, Rutledge	J. W. Richardson, M.D., 131 N. Daisy St., Morristown
Hawkins County	J. S. Lyons, M.D., 100 N. Church Street, Rogersville	Wm. H. Lyons, M.D., Rogersville
Henry County	Kenneth Ross, M.D., Paris Clinic, Paris	A. C. Dunlap, M.D., 302 Caldwell, Paris
Hickman-Perry County	Don L. Gaines, M.D., Hohenwald	Parker D. Elrod, M.D., Centerville
Jackson County	L. R. Dudney, M.D., Gainesboro	J. S. Johnson, M.D., Gainesboro
Knoxville Academy of Medicine	Richard C. Sexton, M.D., Blount Professional Bldg., Knoxville	Ray J. Leffler, M.D., East Tenn. Baptist Hospital, Knoxville
Lawrence County	Boyd P. Davidson, M.D., 369 Brink St., Lawrenceburg	James C. Hudgins, M.D., 200 S. Military, Lawrenceburg
Lincoln County	Paul E. Whittemore, M.D., 214 West College, Fayetteville	Anne U. Bolner, M.D., 204 N. Main, Fayetteville
Macon County	M. E. Painter, M.D., Lafayette	Jack C. Clark, M.D., Lafayette
Marshall County	J. W. Limbaugh, M.D., Med. Arts Bldg., Lewisburg	W. S. Poarch, M.D., Lewisburg
Maury County	William G. Fuqua, M.D., Hatcher Lane, Columbia	W. N. Jernigan, M.D., 209 W 8th Street, Columbia
McMinn County	Robert W. Trotter, M.D., Athens	James Cleveland, M.D., Englewood
Memphis-Shelby County	Gilbert J. Levy, M.D., 188 S. Bellevue, Memphis 4	R. A. Calandruccio, M.D., 869 Madison Ave., Memphis 3 Mr. Les Adams, 774 Adams Avenue, Memphis—Executive Secretary
Monroe County	R. C. Kimbrough, M.D., Madisonville	Jas. H. Barnes, M.D., Sweetwater
Montgomery County	Bryan T. Iglehart, M.D., 1724 Memorial Dr., Clarksville	F. C. Petty, M.D., Memorial Hospital, X-ray Dept., Madison St., Clarksville
Northwest Tennessee Academy of Medicine	R. David Taylor, M.D., Baird-Brewer Hosp., Dyersburg	W. I. Thornton, Jr., M.D., 402 Tickle St., Dyersburg
Overton County	H. B. Nevans, M.D., Livingston	W. G. Quarles, M.D., Livingston
Putnam County	J. T. DeBerry, M.D., 141 E. Broad St., Cookeville	Thurman Shipley, M.D., 135 W. 2nd St., Cookeville
Roane-Anderson County	Earl Eversole, Jr., M.D., Med. Arts Bldg., Oak Ridge	Robert DePersio, M.D., Med. Arts Bldg., Oak Ridge
Robertson County	W. P. Stone, M.D., 7th & Garner St., Springfield	Sue C. Atwood, M.D., 500 Main, Springfield
Rutherford County	B. S. Davison, M.D., 320 E. Main Street, Murfreesboro	Radford Smith, M.D., 420 N. University St., Murfreesboro
Scott County	H. M. Leeds, M.D., Oneida	Roy L. McDonald, M.D., Oneida
Sevier County	Robert A. Broady, M.D., Sevierville	John M. Hickey, Jr., M.D., Sevierville
Smith County	Hugh E. Green, M.D., Carthage	David G. Petty, M.D., Carthage
Sullivan-Johnson County	J. W. Erwin, M.D., Sullivan Co. Health Dept., Blountville	James G. McFaddin, M.D., 120 Blountville Highway, Bristol
Sumner County	Ira N. Kelley, M.D., Hartsville	Thomas F. Carter, M.D., Westmoreland
Tipton County	James S. Ruffin, M.D., Covington	Warren A. Alexander, M.D., Covington
Warren County	James L. Moore, M.D., Morford St., McMinnville	W. B. Bigbee, M.D., 202 Morford St., McMinnville
Washington-Carter-Unicoi County	Ben D. Hall, M.D., 115 W. Fairview Avenue, Johnson City	Gilbert Rannick, M.D., 107 W. Fairview Ave., Johnson City
Weakley County	Nathan F. Porter, M.D., Greenfield	E. T. Frank, M.D., Greenfield
White County	W. H. Anderson, M.D., Sparta	Robert F. Baker, M.D., 233 E. Broadway, Sparta
Williamson County	Adolphus Bray, M.D., Franklin	Joseph L. Willoughby, M.D., Franklin
Wilson County	James C. Bradshaw, Jr., M.D., McFarland Hospital, Lebanon	T. R. Puryear, M.D., 239 E. Main, Lebanon

in virtually all diarrheas... prompt symptomatic control

LOMOTIL®

TABLETS / LIQUID—Each tablet and each 5 cc. of liquid contains:
diphenoxylate hydrochloride . . . 2.5 mg.
(Warning: May be habit forming)
atropine sulfate . . . . . 0.025 mg.



Lomotil controls the basic physiologic dysfunction in diarrhea—excessive propulsive motility. Pharmacologic evidence indicates that it does so by directly inhibiting propulsive movements of the intestines. This direct, well-localized activity controls diarrheas of widely varied origin and does so promptly, conveniently and economically.

The relatively few conditions in which Lomotil has given less than satisfactory control have been, for the most part, those such as severe ulcerative colitis in which too little anatomic or functional capacity of the intestines remains for the motility-lowering action of Lomotil to have effect.

It should be noted, however, that Lomotil has proved highly useful in mild to moderate ulcerative colitis and in several other refractory forms of diarrhea.

The recommended initial adult dosage is two tablets (2.5 mg. each) three or four times daily, reduced to meet the requirements of each patient as soon as the diarrhea is controlled. Maintenance dosage may be as low as two tablets daily. *Children's* daily dosage (in divided doses) varies from 3 mg. for a child of 3 to 6 months to 10 mg. for one 8 to 12 years of age. Lomotil is an exempt narcotic; its abuse liability is low and comparable to that of codeine. Recommended dosages should not be exceeded. Side effects are relatively uncommon but among those reported are gastrointestinal irritation, sedation, dizziness, cutaneous manifestations, restlessness and insomnia. Lomotil should be used with caution in patients with impaired liver function and in patients taking addicting drugs or barbiturates. Lomotil is a brand of diphenoxylate hydrochloride with atropine sulfate; the subtherapeutic amount of atropine is added to discourage deliberate overdosage.

Research in the Service of Medicine SEARLE

Nashville Surgical Supply Company

The Physician and Hospital's Complete Supply & Service Source

Physicians equipment and supplies

Hospital equipment and supplies

Laboratory equipment and supplies

THE MOST COMPLETE DRUG AND BIOLOGICAL SUPPLY SOURCE IN TENNESSEE

Distributor for Standard and Mattern X-Ray Equipment and Supplies

24-Hour Emergency Service

Nashville Surgical Supply Co., Incorporated

1911 Church St.

Nashville, Tennessee

Phone AL 5-4601

Tennessee Medical Association's

Exclusively Approved

GROUP DISABILITY INCOME PROGRAM

Administered By

Smith, Reed, Thompson & Ellis Co.

1322 Nashville Trust Building
NASHVILLE 3, TENNESSEE
Phone 255-7625

WILLIAM H. ELLIS, C. L. U. MGR.
THOMAS G. HENRY
CALVIN K. WESSMAN

ASSOCIATES

Alden H. Smith, C. L. U.

Arthur D. Reed, C. L. U.

Joe Thompson, Jr., C. L. U.

Alden H. Smith, Jr., C. L. U.

E. Dan Smith, II

Underwritten By

Commercial Insurance Company

Newark, New Jersey



Whether you're a teacher correcting exams. A student cramming for them. A housewife cleaning up after the kids. Or a businessman working late at night. Whoever you are, things go better when you pause and refresh with ice-cold Coca-Cola.



A SURGICAL INSTRUMENT OIL

Scientifically Developed for the

MEDICAL PROFESSION

Apply as indicated; a few drops especially in locks and serrations of instruments, or other delicate mechanisms. Leave a thin film over the entire instrument to prevent rust in disuse or storage. This highly refined clear instrument oil will not clog, gum or turn rancid. Non-corrosive.

4-oz. can . . . 75c
Pt. bottle with dispensing can . . . $2.50
Qt. bottle with dispensing can . . . $4.00
Plus post.

White Surgical Supply Co.

SURGICAL SUPPLIES & ACCESSORIES

515 West Church Ave. Knoxville 7, Tennessee

Telephone 3-1186

WANTED

Physician for Staff Position in medical department of chemicals company with approximately 4,000 employees; liberal benefits; salary commensurate with experience and qualifications; State license required; age limit 65.

Write to:

E. Q. HULL, M.D., Medical Director
P. O. Box 8004
South Charleston 3, West Virginia



PHYSICIANS MUTUAL INSURANCE COMPANY
(FORMERLY PHYSICIANS CASUALTY ASSOCIATION AND PHYSICIANS HEALTH ASSOCIATION)
115 SOUTH 42ND STREET OMAHA 31, NEBRASKA

Something "New"

For

Doctors

Protect Your Most Valuable Asset

"Your Time"

Our New Sickness and Accident Protection Policy
Pays the Amount You Select up to $500.00 per Month
For Loss of Time Caused by Accident or Sickness

Insuring Physicians & Dentists for 60 years.

PHYSICIANS MUTUAL INSURANCE COMPANY

COUPON

Physicians Mutual Insurance Co.
115 So. 42nd St. Omaha 31, Nebraska
"Offering Protection to Physicians and Dentists
Since 1902"

Name_____ Age_____

Address_____ City_____



Out-Patient Clinic and Offices

HILL CREST SANITARIUM

Established in 1925

FOR NERVOUS AND MENTAL DISEASES
AND ADDICTION PROBLEMS

James A. Becton, M.D.
P. O. Box 2896, Woodlawn Station, Birmingham 6, Ala.

James K. Ward, M.D.
Phones WOrth 1-1151

Annual Clinical Conference

Chicago Medical Society

March 2, 3, 4 and 5, 1964

Palmer House, Chicago

Lectures *Teaching Demonstrations*

Medical Color Telecasts *Film Lectures*

Instructional Courses

The CHICAGO MEDICAL SOCIETY ANNUAL CLINICAL CONFERENCE should be a MUST on the calendar of every physician. Plan now to attend and make your reservation at the Palmer House.



YOU:

HISTORY: 20 years of study, plus internship/residency. Substantial investment in professional location, equipment. **SIGNS and SYMPTOMS**: Reports that large home, growing family and minimal professional standard of living are a concern. Still ahead—college costs, retirement, natural estate ambitions. **PROGNOSIS**: Needs 15-20 peak years of income to pay off education, home; rear family; retire. All this while battling tough taxes, and without the benefit of social security or company paid life and disability insurance, pension plan. **TREATMENT**: Learn about Mutual Benefit Life's "Seven Significant Benefits". Talk with a M.B.L. representative. See how a built-for-you plan solves specific problems through unique disability clauses, unusually high cash and loan values, liberal survivor income options—and more. Write on your own professional letterhead for exclusive report covering a full range of typical insurance requirements for physicians. Just ask for a copy of *Consultant's Report*.

Those who plan ahead get ahead **MUTUAL BENEFIT LIFE** INSURANCE COMPANY, NEWARK, NEW JERSEY

CARRIER OF YOUR TENNESSEE MEDICAL ASSOCIATION GROUP LIFE INSURANCE PLAN

EDWARD C. DUNN	SETH W. SIZER	THERON M. LEMLY
1104 Sudekum Bldg.	1211 James Bldg.	1309 Poplar Ave.
Nashville, Tenn.	Chattanooga, Tenn.	Memphis, Tenn.

REFER EYE PATIENTS
TO AN
EYE PHYSICIAN

By so doing, you will be assured of a complete diagnosis of your patients' eyes.

Guild Opticians complete the cycle for Professional Service.

GUILD OF PRESCRIPTION OPTICIANS OF AMERICA

BE SAFE—BE SURE

SEE

YOUR GUILD OPTICIAN

FOR

THE BEST SERVICE

EYE PHYSICIANS: Please Note—

Your prescriptions for glasses are "SAFE" when referred to a Guild Optician. Bound by the code of Ethics to uphold the highest standards in optical service.

Reprint Price Schedule

THE JOURNAL OF TENNESSEE MEDICAL ASSOCIATION

	100	200	300	400	500	600	700	800	900	1000	Add'l 1000
2 pages	12.80	14.15	15.60	17.30	17.65	18.00	18.55	19.50	20.70	21.85	12.00
4 pages	18.80	23.00	25.60	28.50	29.60	30.25	31.20	33.55	35.65	37.80	22.60
8 pages	36.80	41.60	46.15	51.00	52.30	53.00	54.45	57.85	61.50	64.90	35.00
12 pages	48.10	53.40	58.60	63.75	64.70	65.15	66.60	70.80	75.00	79.00	41.60
Envelopes 8¼x11¼	13.30	16.00	18.50	21.30	22.50	24.00	26.40	28.80	31.20	33.60	26.40

Reprints of articles in THE JOURNAL OF TENNESSEE MEDICAL ASSOCIATION are available at the following prices. Orders should be placed within 30 days following publication of the journal in which the article appears.

The above prices are for reprints supplied in the page size of THE JOURNAL OF TENNESSEE MEDICAL ASSOCIATION. If smaller or larger sizes are required, special prices must be obtained. Address

McQUIDDY PRINTING COMPANY **NASHVILLE, TENNESSEE**

SAINT ALBANS

PSYCHIATRIC HOSPITAL

(A Non-Profit Organization)

Radford, Virginia

Telephone: 639-2482

STAFF

James P. King, M.D., Director

William D. Keck, M.D.
Clinical Director
James K. Morrow, M.D.
Silas R. Beatty M.D.
Jack M. Rogers, M.D.

Edward W. Gamble, III, M.D.
Morgan E. Scott, M.D.
Jean M. Glasgow, M.D.
J. William Giesen, M.D.
Internist (Consultant)

Clinical Psychology:
Thomas C. Camp, Ph.D.
Artie L. Sturgeon, Ph.D.

Don Phillips
Administrator

AFFILIATED CLINICS

Bluefield Mental Health Center
525 Bland St., Bluefield, W. Va.
David M. Wayne, M.D.
Phone: 325-9159

Beckley Mental Health Center
109 E. Main Street, Beckley, W. Va.
W. E. Wilkinson, M.D.
Malcolm G. MacAulay, M.D.
Phone: 253-8397

Charleston Mental Health Center
1119 Virginia St., E., Charleston, W. Va.
Richard D. Kitching, M.D.
Phone: 344-3578

Norton Mental Health Clinic
Norton Community Hospital, Norton, Va.
Pierce D. Nelson, M.D.
Phone: 1090

Professional Liability Insurance

(MALPRACTICE)

Policy and Rates Approved

by the

TENNESSEE MEDICAL ASSOCIATION



FARRINGER & CO.
Phone 524-7335
KNOXVILLE, TENNESSEE

FAW & SHERROD, INC.
JOHNSON CITY, TENNESSEE

INGLE-KNOX INSURANCE AGENCY
CHATTANOOGA, TENNESSEE

LIPSCOMB & PITTS COMPANY
MEMPHIS, TENNESSEE

Standard Coverage That

SAVES YOU 36%

Limits	Physicians	Surgeons
NO. X-RAY THERAPY		
5/15	$ 44.80	$107.20
50/150	84.67	202.61
100/300	92.29	220.83
200/300	96.32	230.48
300/600	112.80	253.20
500/1 Million	132.83	278.85
1 Million/1 Million	139.55	294.93
X-RAY—RADIUM OR SHOCK THERAPY		
5/15	89.60	152.00
50/150	169.34	287.28
100/300	184.58	313.12
200/300	192.64	326.80
300/600	213.60	354.00
500/1 Million	237.66	383.68
1 Million/1 Million	251.10	406.48

1. Partnership liability, increase premium for each partner by 20%
2. Anesthesiologists take Physicians rates.
3. Premises Liability (bodily injury and property damage) Minimum premium $12.40
4. Other limits will be quoted on request.

Your policy backed by
Assets over $40,000,000

Shelby Mutual Insurance Co.
of Shelby, Ohio

*20% off on Hospital—Professional Liability

*For Information on Hospital—Professional Liability and other coverages, please contact one of the agents listed.

PLACEMENT SERVICE

The Placement Service of the Tennessee Medical Association is designed to assist doctors and communities to get together. Further information and contacts to both physicians and communities are available from the Public Service Office, 112 Louise Avenue, Nashville, Tennessee, 291-4584.

Locations Wanted

DERMOTOLOGIST, 30 years of age, graduate of the University of Texas Medical Division, would like clinical or associate practice with part-time teaching, in any size West Tennessee town. Married. Episcopalian. Available immediately. LW-447

◆

GENERAL PRACTITIONER, 43 years of age, graduate of the Medical College of Georgia, would like to establish either solo or associate practice in any city or town in Tennessee. Extensive residency training. Now in private practice. Married. Presbyterian. Available immediately. LW-472

◆

GENERAL PRACTITIONER, 28 years of age, graduate of the University of Tennessee College of Medicine, would like clinical practice in any city in East Tennessee. Will consider institutional or industrial practice. Now interning. Married. Presbyterian. Available early 1964. LW-476

◆

INTERNIST, 31 years of age, graduate of the University of Tennessee College of Medicine, would like associate, assistant, or clinical practice in any city of Middle Tennessee, 40,000 population or over. Married. Catholic. Tennessee license. Residency training. Now in military service. Available January 1964. LW-494

◆

GENERAL SURGEON, 48 years of age, and his wife, an Internist and Anesthesiologist, would like associate, assistant, clinical, industrial or institutional practice in any location in Tennessee. Both graduates of the Medical Evangelists College in California. Residency training. Seventh Day Adventists. Available anytime. LW-495

◆

ANESTHESIOLOGIST, 42 years of age, graduate of the Medical College of Madrid, Spain, would like assistant, associate or group practice in large city of East Tennessee. Extensive residency training. Available January 1964. LW-496

◆

OBSTETRICIAN-GYNECOLOGIST, 33 years of age, graduate of the University of Iowa Medical School, would like associate practice in any city in West Tennessee. Now completing three years residency training. Married. Hebrew. Junior Fellow, American College of Ob-Gyn. Available immediately. LW-498

◆

INTERNIST, Board eligible, 54 years of age, native Tennessean, graduate of the University of Tennessee College of Medicine, would like to relocate in Tennessee. Married. Methodist. Prefers industrial, institutional or public health practice. No preference as to size or location. Available January 1964. LW-500

◆

GENERAL SURGEON, 33 years of age, graduate of the University of Tennessee College of Medicine, would like practice in East Tennessee city of 10,000 plus. Now in general practice with general surgery. Board qualified. Married. Episcopalian. Available upon notice. LW-521

◆

GENERAL PRACTITIONER, 30 years of age, graduate of the University of Tennessee College of Medicine, would like associate practice in city of 4,000 plus, no preference as to location. Native Tennessean. Tennessee license. Married. Methodist. Available upon completion of internship, July 1964. LW-522

Physicians Wanted

Middle Tennessee town, trade area 8,000, in need of a physician in the field of internal medicine. Two years internship and one year residency preferred. Office space available. Hospital in town. PW-136

◆

Middle Tennessee town, near large metropolitan area, in need of physician to establish pediatric practice. Office space near hospital available. PW-137

◆

Town in northern part of Tennessee in great need of a physician. Approved for Sears-Roebuck Foundation assistance. No other physician in community. Medical economic survey report available upon request. PW-177

◆

Upper East Tennessee town in need of physician to replace retired general practitioner. Approved for Sears-Roebuck Foundation assistance and medical survey report available upon request. Housing and office space available. Near large industrial area. PW-185

◆

City of over 12,000 population in Middle Tennessee needs replacement in clinic. General practitioner with surgical experience preferred but not required. Housing and office space, with equipment, available. PW-188

◆

A general practitioner needed in East Tennessee town of over 800. Hospital located in town. Office space and equipment available. Associate or assistant wanted. PW-192

◆

Middle Tennessee town of 7,500 in need of physician to establish practice. Well built clinic building available for office. Active support of county and town officials, and civic organizations. No other physician in area. PW-195

◆

General practice available for physician in suburb of large East Tennessee city. Office ready for immediate occupancy. Another location nearby, or will build to suit physician. PW-201

◆

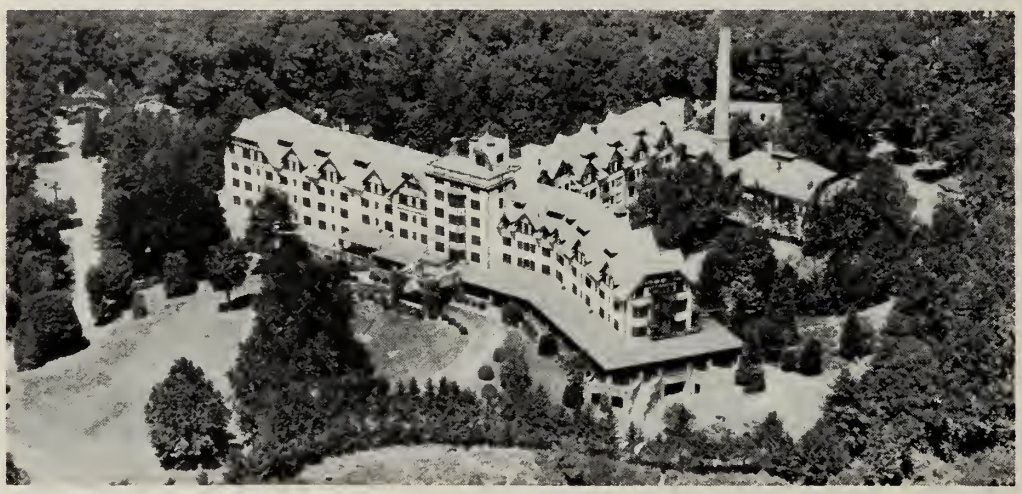
A fully equipped clinic FOR RENT OR LEASE to a general practitioner in East Tennessee town of 4,500, replacing physician leaving for residency training. Excellent opportunity. PW-197

◆

Practice and office equipment of recently deceased physician in West Tennessee city of 5,000 for lease or sale. Office space consists of two examining rooms, two treatment rooms, laboratory, plus other essential facilities. General practice, with general surgery. PW-204

APPALACHIAN HALL
Established 1916

Asheville North Carolina



An Institution for the diagnosis and treatment of Psychiatric and Neurological illnesses, rest, convalescence, drug and alcohol habituation.
Insulin Coma, Electroshock and Psychotherapy are employed. The Institution is equipped with complete laboratory facilities including electroencephalography and X-ray.
Appalachian Hall is located in Asheville, North Carolina, a resort town, which justly claims an all around climate for health and comfort. There are ample facilities for classification of patients, rooms single or en suite.

WM. RAY GRIFFIN, JR., M.D. MARK A. GRIFFIN, SR., M.D.
ROBERT A. GRIFFIN, M.D. MARK A. GRIFFIN, JR., M.D.

For rates and further information write
Appalachian Hall, Asheville, N. C.

List of Advertisers in This Issue

American Cyanamid Company	XIX, XXVI, XXVII	Lilly, Eli and Co.	I, XXX
Ames Co., Inc.	XLIII	Mid-South Post Graduate Assembly	XIV
Appalachian Hall	XLII	Murfreesboro VA Hospital	XXVIII
Baker Laboratories, Inc.	VIII, IX	Mutual Benefit Life Ins. Co.	XXXVII
Blood Bank Foundation	XVIII	Nashville Surgical Supply Co., Inc.	XXXII
Brayten Pharmaceutical Company	XXII	Oak Motors	VI
Burroughs Wellcome & Co.	XVI, XXIX	Parke-Davis and Company	II
Chatham Pharmaceuticals, Inc.	XXIV	Physicians Mutual Ins. Co.	XXXV
Chicago Medical Society	XXXVI	Placement Service	XLI
City View Sanitarium	XXVIII	Robins, A. H. Co.	VII
Coca-Cola	XXXIV	Roche Laboratories	XLIV
Endo Laboratories	XV	St. Albans	XXXVIII
Farringer & Company	XL	Searle, G. D. & Co.	XXXI
First Texas Pharmaceuticals, Inc.	XX	Smith, Kline & French Laboratories	X
Geigy Pharmaceuticals	XII	Smith, Reed, Thompson & Ellis Co.	XXXIII
Glenbrook Laboratories	XXI	Squibb	III
Guild Opticians	XXXVIII	Tafel Surgical Supply Co., Inc.	XXVIII
Hart Laboratories	XVII	Thompson, M. R., Inc.	XIII
Hill Crest Sanitarium	XXXVI	Wallace Laboratories	XVIII, XXIII, XXV
Hull, E. Q., M.D.	XXXIV	White Surgical Supply Co.	XXXIV
Jennings, Howard	VI	Winthrop Laboratories	V, XI
Kay Surgical, Inc.	XXIV		

neither **tension**, nor **spasm**,
nor **stasis**
stays this patient
from his
appointed rounds



DECHOLIN-BB®

. . . . . especially when
UPPER G.I. COMPLAINTS
have biliary implications

for nervous **tension** → **Each Tablet Contains:** BUTABARBITAL SODIUM 15 mg (¼ gr.).
WARNING: May be habit forming

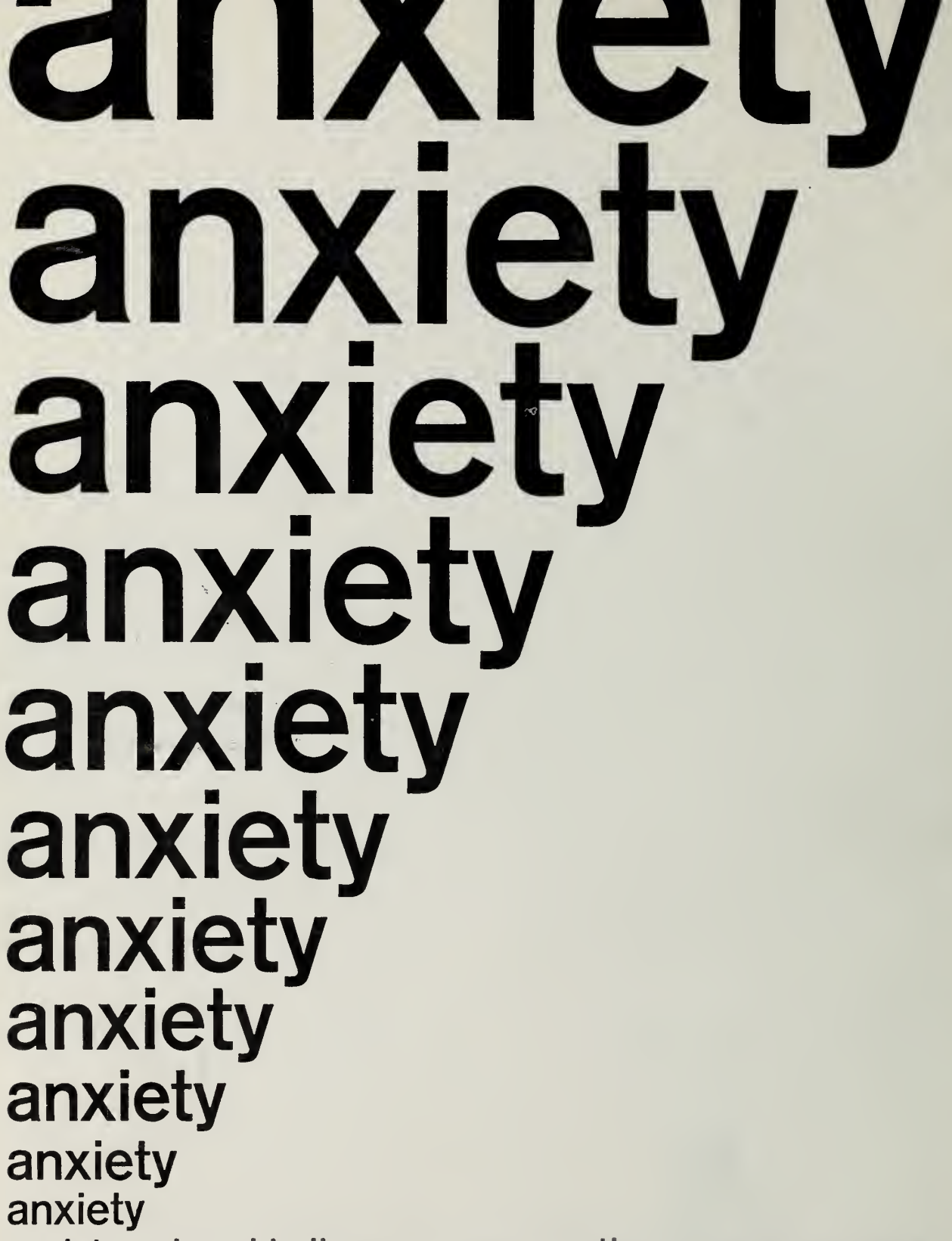
for smooth-muscle **spasm** → BELLADONNA EXTRACT 10 mg (⅙ gr.).

for biliary/intestinal **stasis** → DEHYDROCHOLIC ACID 250 mg. (3¾ gr.).

Average adult dose: 1 or, if necessary, 2 tablets three times daily. **Precautions:** Observe patients periodically for increased intraocular pressure and barbiturate habituation or addiction; caution drivers against possible drowsiness. **Side effects:** Dehydrocholic acid may cause transitory diarrhea; belladonna may cause blurred vision and dry mouth. **Contraindications:** Biliary tract obstruction, acute hepatitis, glaucoma, prostatic hypertrophy. **Available:** DECHOLIN-BB, bottles of 100 tablets. **Also:** DECHOLIN® with Belladonna (dehydrocholic acid, 250 mg.; belladonna extract, 10 mg.) and DECHOLIN® (dehydrocholic acid, 250 mg.), bottles of 100 and 500 tablets.

AMES COMPANY, INC.
Elkhart • Indiana
Toronto • Canada

3498263



LIBRIUM®
(chlordiazepoxide HCl
the successor
to the tranquilizers

ROCHE

In prescribing: Dosage—Adults: Mild to moderate anxiety and tension, 5 or 10 mg t.i.d. or q.i.d.; severe states, 20 or 25 mg t.i.d. or q.i.d. Geriat patients: 5 mg b.i.d. to q.i.d. Cautions—Occasional side effects, often dose-related, are drowsiness, ataxia, minor skin rashes, menstrual irregularitie nausea and constipation. Paradoxical reactions may occasionally occur in psychiatric patients. Individual maintenance dosages should be determine Advise patients against possibly hazardous procedures until maintenance dosage is established. Though compatible with most drugs, use care in co bining with other psychotropics, particularly MAO inhibitors or phenothiazines; warn patients of possible combined effects with alcohol. Observe usu precautions in impaired renal or hepatic function, and in long-term treatment. Caution should be exercised in prescribing any therapeutic agent f pregnant patients. Supplied—Capsules, 5 mg, 10 mg and 25 mg, bottles of 50 and 500.

THE JOURNAL OF THE TENNESSEE MEDICAL ASSOCIATION

LIBRARY OF THE RHODE ISLAND MEDICAL SOCIETY

TENNESSEE MEDICAL ASSOCIATION
129th Annual Meeting
Peabody Hotel, Memphis, Tennessee
April 12-15, 1964

FEBRUARY, 1964

Volume 57 **Number 2**

of Contents on Page IV
to Advertisers on Page XLVI

AMYTAL TAKES THE EDGE OFF DAYTIME ANXIETY AND TENSION

Amytal is a moderately long-acting barbiturate that takes the edge off daytime anxiety and tension without significant change in mood and attitude. Since Amytal is metabolized in the liver within twenty-eight hours, overlapping of effect is minimized, and renal damage does not constitute a contraindication.

Side-Effects: Idiosyncrasy or allergic reactions to the barbiturates may occur.

Precautions and Contraindications: Amytal should be used with caution in patients with decreased liver function, since a prolongation of effect may occur. Administration in the presence of uncontrolled pain may produce excitement. WARNING—May be habit-forming.

Dosage: Doses should be individualized for each patient. The usual adult sedative dosage ranges from 30 mg. (1/2 grain) to 50 mg. (3/4 grain) two or three times daily.

Additional information available upon request. Eli Lilly and Company, Indianapolis 6, Indiana.

AMYTAL® AMOBARBITAL

Lilly

400152

Helps to make the epileptic's life more meaningful

Dilantin® Kapseals®
(Diphenylhydantoin sodium)

PARKE-DAVIS

Effective in control of grand mal and psychomotor seizures, this agent enables the epileptic patient to lead a useful life.

Indications: Grand mal epilepsy and certain other convulsive states. **Precautions:** Toxic effects are infrequent: allergic phenomena such as polyarthropathy, fever, skin eruptions, and acute generalized morbilliform eruptions with or without fever. Rarely, dermatitis goes on to exfoliation with hepatitis, and further dosage is contraindicated. Eruptions then usually subside. Though mild and rarely an indication for stopping dosage, gingival hypertrophy, hirsutism, and excessive motor activity are occasionally encountered, especially in children, adolescents, and young adults. During initial treatment, minor side effects may include gastric distress, nausea, weight loss, transient nervousness, sleeplessness, and a feeling of unsteadiness. All usually subside with continued use. Megaloblastic anemia has been reported. Nystagmus may develop. Nystagmus in combination with diplopia and ataxia indicates dosage should be reduced. Periodic examination of the blood is advisable.

PARKE-DAVIS

PARKE, DAVIS & COMPANY, Detroit, Michigan 48232

15263



New Books and Editions



New! The 1964 CURRENT THERAPY VOLUME

This just-revised annual volume gives you today's most successful treatments for nearly 400 common diseases and disorders—from abscess to zoster, from the common cold to alcoholism. Over 300 eminent contributors to *1964 Current Therapy* have sifted hundreds of new treatments and drugs—discarded the outmoded, retained those still most effective, and added the new and more successful. These concise but thorough descriptions of treatment methods bristle with practical facts and brisk instructions. Exact dosages are given and prescriptions written out where necessary. This year's volume contains 237 articles in which some significant changes have been made in the treatment method. Here are but a few: *Newer knowledge and Therapy of Chorea—Use of Flagyl in Therapy of Trichomoniasis—Management of Transfusion Reactions and Shock—The New Vaccine for Prevention of Measles—Treatment of Episodic Cerebral Circulatory Syndrome—Streptokinase and Fibrinolysin in Treatment of Stroke—Newer Agents in Therapy of Bacterial Pneumonia—Effective Measures in Managing Hemochromatosis and Hemosiderosis—Improvements in Cardiac Pacemaker—Newer Treatment of Salmonella Infections—Therapy of Neurogenic Raynaud's Syndrome.*

An Annual Volume. Edited by HOWARD F. CONN, M.D., with contributions from 320 Leading Authorities. About 815 pages, 8″ x 10½″, $13.00. *Just Ready!*

New! Reuter's ATLAS OF UROLOGIC ENDOSCOPY

Here is a beautifully illustrated and effective new guide to the urologic uses of the endoscope. A highly informative introductory section discusses modern instruments, recent developments in endophotography, and other technical advances. Dr. Reuter covers the technique of cystoscopy and techniques of transurethral diagnosis and surgery. He illuminates the details of transurethral prostatic resection. Precise instructions are included for handling the resectoscope, and such useful procedures as electrocoagulation with the button electrode are described. The second half of the book is devoted to a diagnostic atlas of magnificent endoscopic views, most reproduced in full color, and accompanied by a brief legend giving the history and symptoms of the patient and the techniques of examination (angle of vision, peculiarities of lens and irrigation, degree of bladder distention). Here are but a few of the many conditions and anatomical views that are pictured: *Subacute follicular cystitis—Many varieties of bladder stones—Dome of atonic bladder—Stricture of the bladder neck—Sarcoma of the bladder—Erupting prostatic abscess—Many views showing results of transurethral prostatectomy—adenoma of the prostate.*

By H. J. REUTER, M.D., Private Urologic Hospital, Stuttgart, Germany. Translated by HUBERT G. W. FROHMÜLLER, M.D., Fellow in Urology of the Mayo Clinic, Rochester, Minnesota. 114 pages, 6⅜″ x 9½″, with 178 figures, 105 in color. About $15.00. *New—Just Ready!*

New (2nd) Edition! Bockus' GASTROENTEROLOGY

Volume I published January, 1963 (Esophagus and Stomach). Volume II Just Ready (Intestines, Colon and Peritoneum). Volume III Ready September, 1964 (Liver, Biliary Passages, Gall Bladder, Pancreas). This is the *New (Second) Edition* of a monumental work on *all known primary and secondary disorders of the digestive tract and its appendages.* Each disorder is discussed in a logical pattern: causative factors, clincial features, diagnostic aids, differential diagnosis and therapy. Illustrations are used lavishly. Many are in vivid color. Included in the two volumes now completed you'll find new chapters on: *Oral Manifestations of Internal Disease; Tests Employed in the Study of Esophageal Function; Protein-Losing Gastroenteropathies; The Acute Abdomen; Peritoneoscopy; Lymphangiography; etc.* You'll find a new section of endoscopic views of the esophagus and stomach in magnificent color. This revision incorporates all the advances made in the fields of cytology, radiology and biochemistry as they relate to gastroenterology. Newer and more effective methods of therapy are evident throughout.

By HENRY L. BOCKUS, M.D., Emeritus Professor of Medicine, University of Pennsylvania Graduate School of Medicine. With contributions from 31 former and present associates at the University of Pennsylvania Medical Schools. Three volumes, totalling about 3000 pages, 7″ x 10″, with about 600 illustrations, many in color. **Volume I,** *Esophagus and Stomach,* 958 pages, 298 illustrations, $25.00. *Published January, 1963.* **Volume II,** *The Small Intestine, Absorption and Nutrition, The Colon, Peritoneum, Mesentary and Omentum, Gastrointestinal Parasites,* about 1280 pages, with about 200 illustrations. About $28.00. *Just Ready.* **Volume III,** *Liver, Biliary Tract and Pancreas, Secondary Gastrointestinal Disorders, ready September 1964. New (Second) Edition!*

W. B. SAUNDERS COMPANY West Washington Square, Phila. 5, Pa.

Please send and bill me: ☐ Easy Pay Plan ($5 per month)

☐ *1964 Current Therapy* . . . $13.00 ☐ Reuter's *Urologic Endoscopy* . . . About $15.00

Bockus' *Gastroenterology* . . . ☐ Vol. One $25.00. ☐ Vol. Two About $28.00. ☐ Vol. Three (when ready)

Name.....

Address.....

SJG 2-64

The Journal of the TENNESSEE MEDICAL ASSOCIATION

Published Monthly

By Tennessee Medical Association

OFFICE OF PUBLICATION, 112 LOUISE AVENUE, NASHVILLE 5, TENNESSEE

Second Class Postage Paid at Nashville, Tennessee

Volume 57
No. 2

FEBRUARY, 1964

Per Year, $5.00
Single Copy, 50 Cents

Published Monthly

Contents

An Epidemiologic Investigation of Tuberculosis in a Tennessee High School Following Discovery of a Student Case, WILLIAM F. BRYANT, JR., M.D., R. H. HUTCHESON, M.D., and ANN DILLON, M.S.P.H., Nashville, Tenn. 41

One Stage Total Coloproctectomy and Ileostomy for Ulcerative Colitis, JACK GREENFIELD, M.D., Memphis, Tenn. 45

The Differential Diagnosis of Acute Pancreatitis, JOSEPH J. DODDS, Chattanooga, Tenn. 53

Case Report
Aborting Submucous Myoma in a Cervical Stump, SAMUEL S. BINDER, M.D., Chattanooga, Tenn. 58

Staff Conference 61

Clinicopathologic Conference 67

President's Letter 74

Editorial 75

Special Item 77

Deaths 79

Programs and News of Medical Societies 79

National News 80

Medical News in Tennessee 82

Personal News 84

Book Review 85

Announcements 85

Placement Service 89

TMA Standing Committees 90

Instructions to Contributors

Manuscripts submitted for consideration for publication in the JOURNAL OF THE TENNESSEE MEDICAL ASSOCIATION should be addressed to the Editor, Dr. R. H. Kampmeier, Vanderbilt University Hospital, Nashville 12, Tennessee.

Manuscripts must be typewritten on one side of letter-weight paper. Either double or triple spacing and wide margins must be provided to facilitate editing which will be legible for the printer.

Bibliographic references should not exceed ten or twelve in number documenting key publications. They should appear at the end of the paper. The bibliographic references must conform to the style used in the American Medical Association publications, as,—Alais, F. G.: What Is Known About It, J. Tennessee M. A., 35:132, 1950.

Illustrations must be mounted on white cardboard and be numbered. The editor will determine the number, if any, of illustrations to be used. Additional illustrations will be charged to the author. The author's name should appear on the back of each illustration.

If reprints are desired, the requested number should be indicated in the letter accompanying the manuscript. The author will be billed by the publisher.

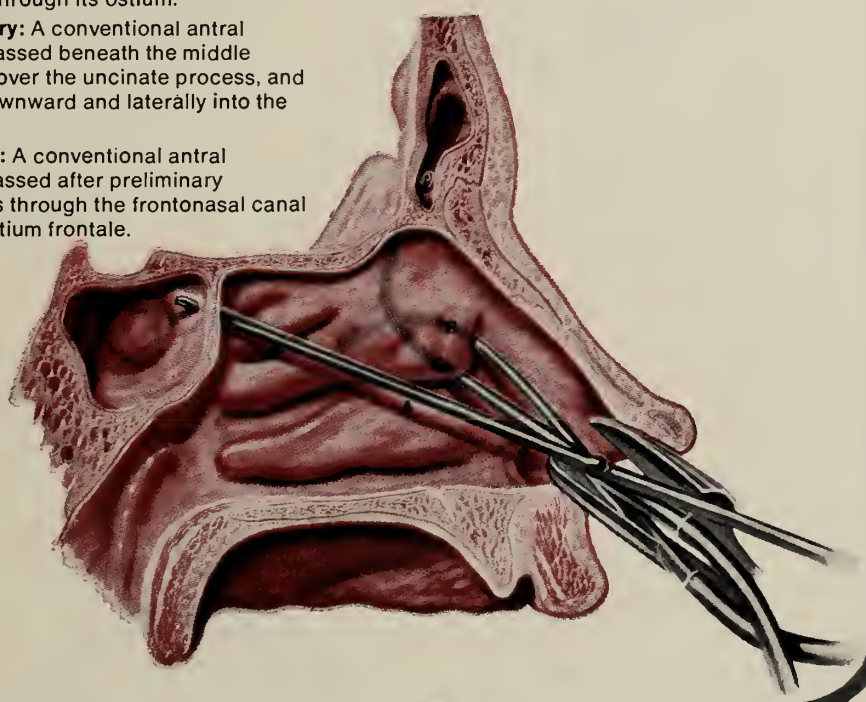
DEVOTED TO THE INTERESTS OF THE MEDICAL PROFESSION OF TENNESSEE
R. H. KAMPMEIER, M.D., Editor
This Association Does Not Officially Indorse Opinions Presented in Different Papers Published herein
Copyright, 1964, by the Tennessee Medical Journal

A rhinologic approach to the sinuses
Sagittal anatomical section of nasal cavity showing approach for probing or irrigation by cannulas.

A—Sphenoid: A sphenoid cannula (under 13.5 cm.) passed around the middle and superior turbinates to the anterior wall of the sinus through its ostium.

B—Maxillary: A conventional antral cannula passed beneath the middle turbinate, over the uncinate process, and rotated downward and laterally into the ostium.

C—Frontal: A conventional antral cannula passed after preliminary maneuvers through the frontonasal canal into the ostium frontale.



In colds and sinusitis
Neo-Synephrine® sooner

hydrochloride
(Brand of phenylephrine hydrochloride)

can help prevent emergency measures later

Before complications arise in colds and sinusitis, Neo-Synephrine solutions and sprays reduce nasal turgescence on contact — to promote essential aeration and drainage. Turbinates shrink, sinus ostia open and drainage is freed. Relief is instant and the threat of complications is lessened.

In the treatment of sinusitis, the ¼ per cent solution is a preferred vasoconstrictor, "...most closely approximating physiologic composition with the least 'rebound' tendency...."* Gentle Neo-Synephrine is well tolerated by delicate respiratory tissues. Systemic effects are practically nil, post-therapeutic turgescence is minimal and repeated applications do not lessen its effectiveness. Neo-Synephrine has been a standard among vasoconstrictors since 1935.

Available in plastic nasal sprays for adults (½%) and children (¼%), in solutions of ⅛, ¼ or 1 per cent.

*Reed, G. F.: Sinusitis, New England J. Med. 267:402, Aug. 23, 1962.

Winthrop Laboratories
New York, N. Y.

Winthrop

(1839M)



When you prescribe for nasal congestion...

remember 'Empirin' Compound to relieve common cold discomfort



Also: 'Empirin'® Compound with Codeine Phosphate*
gr. ⅛—No. 1/gr. ¼—No. 2/gr. ½—No. 3/gr. 1—No. 4
*Warning—may be habit forming



"Upon arising, nose was open" . . . or how another happy patient describes the nasal decongestant action of Dimetapp Extentabs*—how would *your* patients describe it?/In Sinusitis, Colds, U.R.I., up to 10-12 hours' clear breathing on one tablet/Also available: Dimetapp Elixir, for t.i.d. or q.i.d. dosage..

Dimetapp® Extentabs®

[Dimetane® (brompheniramine maleate), 12.0 mg.; phenylpropanolamine hydrochloride, 15 mg.; phenylephrine hydrochloride, 15 mg.]

A. H. ROBINS CO., INC., RICHMOND 20, VA.

*CLINICAL REPORT ON FILE, MEDICAL DEPT., A.H. ROBINS CO., INC.

BRIEF SUMMARY: *Indications:* Dimetapp reduces nasal secretions, congestion, and postnasal drip for symptomatic relief of colds, U.R.I., sinusitis, and rhinitis. *Side Effects:* In high dosages, occasional drowsiness due to the antihistamine or CNS stimulation due to the sympathomimetics may be observed. *Precautions:* Administer with caution in cardiac or peripheral vascular diseases and hypertension. *Contraindications:* Antihistamine sensitivity. Not recommended for use during pregnancy.



Baker's

VOL. 1 NO. 1 FORECAST: HAPPY MOTHERS AND BABIES

NEW 'UNDER
SOLVES DIAP

Trio of suspects identified...

Bacteria a Prime Culprit Organisms such as Bacillus ammoniagenes and Alcaligenes faecalis metabolize urine into chemical irritants. Proper laundering of diapers helps reduce number of organisms, but cannot completely eliminate bacterial growth.

Ammonia and Urea Implicated Ammonia produced by microorganisms is a major cause of skin irritation that leads to diaper rash.

The Moisture—Maceration—Infection Cycle Moisture from urine and feces, combined with diaper friction, results in damp, macerated skin—an ideal environment for bacterial proliferation. In the absence of energetic countermeasures, the moisture—maceration—infection cycle continues, leads to chronic diaper rash problems.



by News



BAKER LABORATORIES, INC.

VER' AGENT
RASH CASE!

Diapersil successful!

tericidal to Ammonia-itting Pathogens Dia-sil contains benzalko-m chloride, which is idly 'cidal' to organisms licated in diaper rash. nzalkonium chloride a proven record of ef-iveness and safety.

Continued 'Uripellent' Protection Silicones in Diapersil form a water-resistant coating which shields the skin from bacterial by-products and from maceration. Silicones have been found outstandingly effective in diaper rash, even when other types of therapy have failed.

Soothing to Inflamed Skin Panthenol, incorporated in a soothing and non-sensitizing base, relieves itching and pain, and gently promotes healing. Diapersil thus provides prompt symptomatic relief in diaper rash as well as in other pediatric skin conditions.

AKER'S DIAPERSIL™ CREME

mula: panthenol, dimethylpolysiloxane, benzalkonium chloride, in a watermiscible, non-sensitizing cream base

To treat and prevent diaper rash, excoriated ttocks, chafing, heat rash and similar conditions

KER LABORATORIES, INC. Subsidiary of U.S. Vitamin & Pharmaceutical Corp.

Pardon Me!



FOR EFFECTIVE CONTROL . . . OF MOST UNNECESSARY COUGHS

A POTENT antitussive and expectorant (without sugar)

TOLU-SED®

(For prompt relief of a wide variety of coughs, including those associated with colds, bronchitis, throat irritations, influenza, asthma, smoking, smog, dust irritation, and excessive use of the voice.)

EACH FLUID OUNCE CONTAINS:

64.8 mg.	**CODEINE PHOSPHATE***—For its well-known actions in suppressing unnecessary and nonproductive coughs, AND to decrease the viscosity of sputum.
6 mg.	**CHLORPHENIRAMINE MALEATE**—To correct those allergic components which may be due to histamines. (The antihistaminic may contribute the usefulness of this preparation if locally released histamine plays a role in the process which causes the bronchial irritation.)
600 mg.	**GLYCERYL GUAIACOLATE**—To increase the fluidity of respiratory tract secretions. This action decreases the irritating effect of inspissated mucus and facilitates its removal.
2.5 gr.	**TOLU**—Because Tolu has been found useful on an empirical basis for coughs of diverse etiology.
2 min.	**CHLOROFORM**

***Contraindications:**

Codeine phosphate may be habit forming. In very large doses it may depress respiration.

Availability: Pints and Gallons

Administration and Dosage:
For Adults: 1 teaspoonful which may be repeated every 3 or 4 hours.

For Children over 6 years of age: ½ teaspoonful every 4 hours if necessary.

First Texas *Pharmaceuticals, Inc.*

DALLAS • ATLANTA • SINCE 1901



Side Effects: No serious toxic reactions are to be expected. Dryness of the mouth, blurred vision, difficult urination, and flushing and dryness of the skin may occur with excessive and prolonged dosage. Precautions: Use with care in incipient glaucoma or urinary bladder neck obstruction. Contraindicated in acute glaucoma, advanced hepatic or renal disease, or idiosyncrasy to any component.

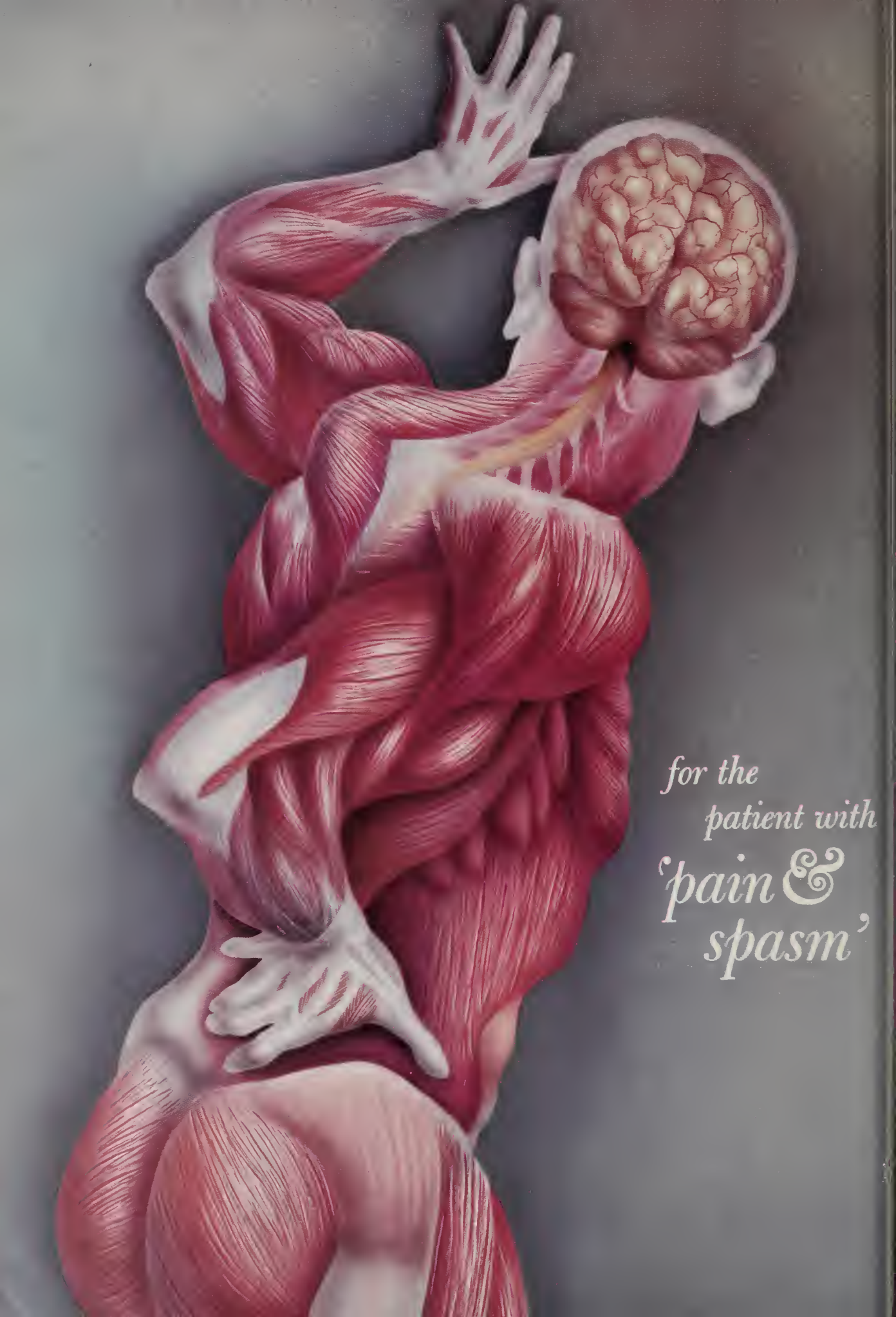
In each Tablet, Capsule or 5 cc. Elixir		In each Extentab
0.1037 mg.	hyoscyamine sulfate	0.3111 mg.
0.0194 mg.	atropine sulfate	0.0582 mg.
0.0065 mg.	hyoscine hydrobromide	0.0195 mg.
16.2 mg. (¼ gr.)	phenobarbital	(¾ gr.) 48.6 mg.

(Warning: May be habit forming)

Prescribed by more physicians than any other antispasmodic —well over 5 billion doses!

A. H. ROBINS CO., INC., RICHMOND 20, VIRGINIA

*This one at Big Basin, California


for the
patient with
'pain &
spasm'

pain *is almost invariably a presenting symptom in cases of skeletal muscle* *spasm*

In some instances, the pain subsides on relaxation of the muscles in spasm. In others, relaxant therapy alone fails to give adequate relief, and supplementary analgesia (and possibly sedation) are indispensable, as in cases of:

provocative pain, when muscle spasm is triggered by some painful underlying musculoskeletal defect.

residual pain, when relaxation of severe spasticity leaves a degree of myalgia that tends to reinvoke spasm.

severe pain, when the degree of pain is such as to cause persistence of symptoms in spite of relaxant therapy.

emotionally aggravated pain, when anxiety or agitation creates tension that thwarts the efficacy of both relaxant and analgesic medication.

In such cases, ROBAXISAL and ROBAXISAL-PH have proven highly effective in assuring decisive and comprehensive relief. The ROBAXISAL formula—of ROBAXIN (methocarbamol), the potent muscle relaxant, together with aspirin, the time-tested and proved analgesic—produces higher plasma salicylate levels than equivalent doses of aspirin alone, and serves effectively to control both spasm and pain. ROBAXISAL-PH's combination of ROBAXIN (methocarbamol) with the analgesic-sedative ingredients of the PHENAPHEN formula—including phenobarbital—helps additionally to ease apprehension.

ROBAXISAL®

Robins

Each pink-and-white laminated Tablet contains:
ROBAXIN (methocarbamol, Robins) .....400 mg. Aspirin (5 gr.).....325 mg.
U.S. Pat. No. 2770649

ROBAXISAL®-PH

Each green-and-white laminated Tablet contains:
ROBAXIN .....400 mg. (methocarbamol, Robins)
Phenacetin (1½ gr.)....97 mg.
Aspirin (1¼ gr.).....81 mg.
Hyoscyamine sulfate 0.016 mg.
Phenobarbital (⅛ gr.).... 8.1 mg.
(Warning: May be habit forming)



"PAIN & SPASM" –a two-headed dragon!

ROBAXISAL and ROBAXISAL-PH are indicated in strains and sprains, painful disorders of the back, "whiplash" injury, myositis, pain and spasm associated with arthritis, torticollis, and headache associated with muscular tension.

Side effects such as lightheadedness, slight drowsiness, dizziness and nausea may occur rarely in patients with intolerance to drugs, but they usually disappear on reduction of dosage.

Contraindicated for patients hypersensitive to any component of the formulations. There are no specific contraindications to methocarbamol, and untoward reactions are not to be expected.

A. H. ROBINS CO., INC., Richmond 20, Virginia

because
it works*
in coughs
Cheracol



he'll like the way
it tastes

*By liquefying secretions in the respiratory tree, Cheracol makes it easier for the patient to cough—in accord with the physiologic defense mechanism.

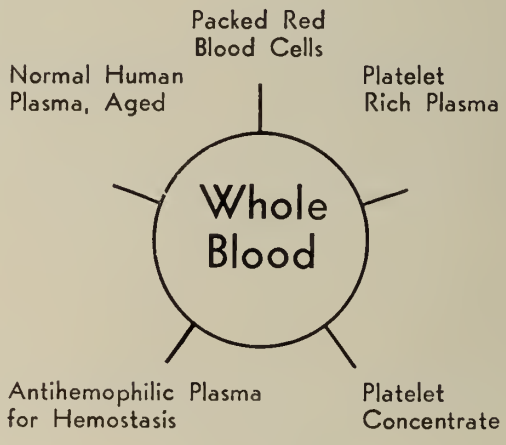
© 1964, THE UPJOHN COMPANY

Upjohn

THE UPJOHN COMPANY, KALAMAZOO, MICHIGAN

Follow
the trend to

BLOOD COMPONENT THERAPY



Best for the patient and More Economical.

All available from

BLOOD BANK FOUNDATION

1921 Broadway ALpine 4-3551

NASHVILLE, TENNESSEE



Doctor, you can take it with you!



THE BURDICK EK-III **DUAL-SPEED ELECTROCARDIOGRAPH**

- 26½ pounds light, including all accessories and carrying case! Ideal for office or bedside use
- 25 or 50 mm. speed — an accurate record for an accurate diagnosis
- frequency response greatly in excess of minimum A.M.A. standards
- top-loading paper drive eliminates tedious paper-threading adjustments

Burdick

THE BURDICK CORPORATION
MILTON, WISCONSIN
Branch Offices: New York • Chicago • Atlanta • Las Angeles
Dealers in all principal cities

KAY SURGICAL, INC.
1144 Madison Ave. Memphis, Tenn.

because it worked* in coughs Cheracol



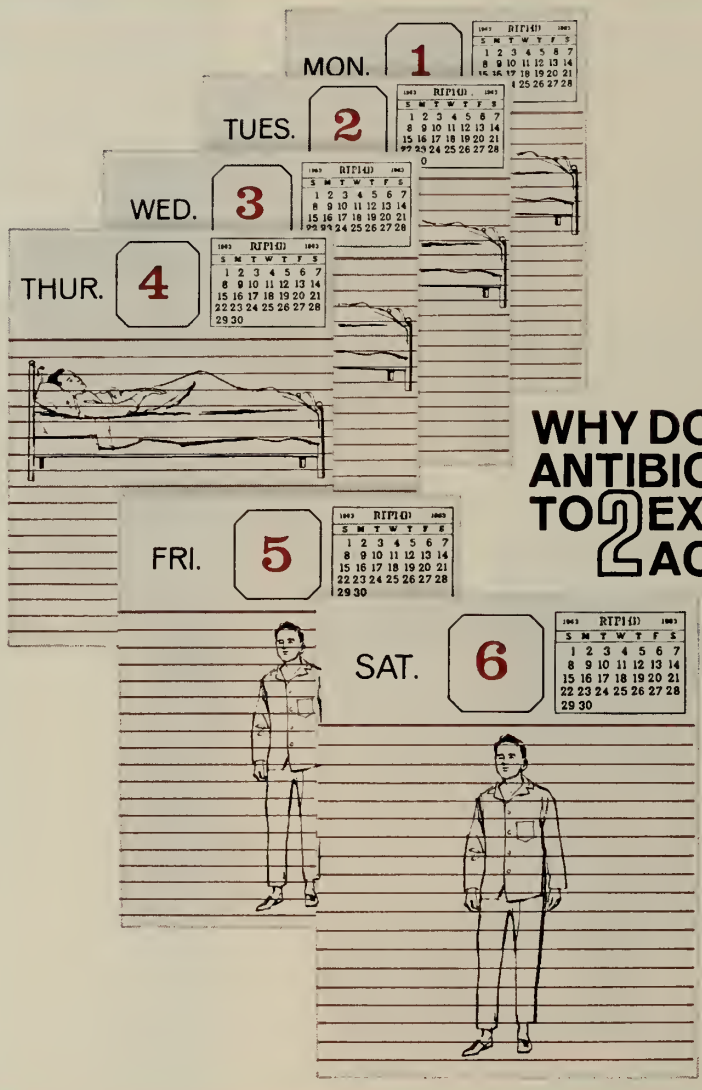
he liked the way it tasted

*By liquefying secretions in the respiratory tree, Cheracol made it easier for the patient to cough—in accord with the physiologic defense mechanism.

©1964, THE UPJOHN COMPANY

Upjohn

THE UPJOHN COMPANY, KALAMAZOO, MICHIGAN



WHY DOES ONE ANTIBIOTIC GIVE UP TO 2 EXTRA DAYS' ACTIVITY?

Because it is more resistant to disintegration, has a lower renal clearance rate than earlier tetracyclines'...a favorable depot effect resulting from protein binding and greater mg. potency...all giving higher, sustained *in vivo* activity which continues long after the last dose.

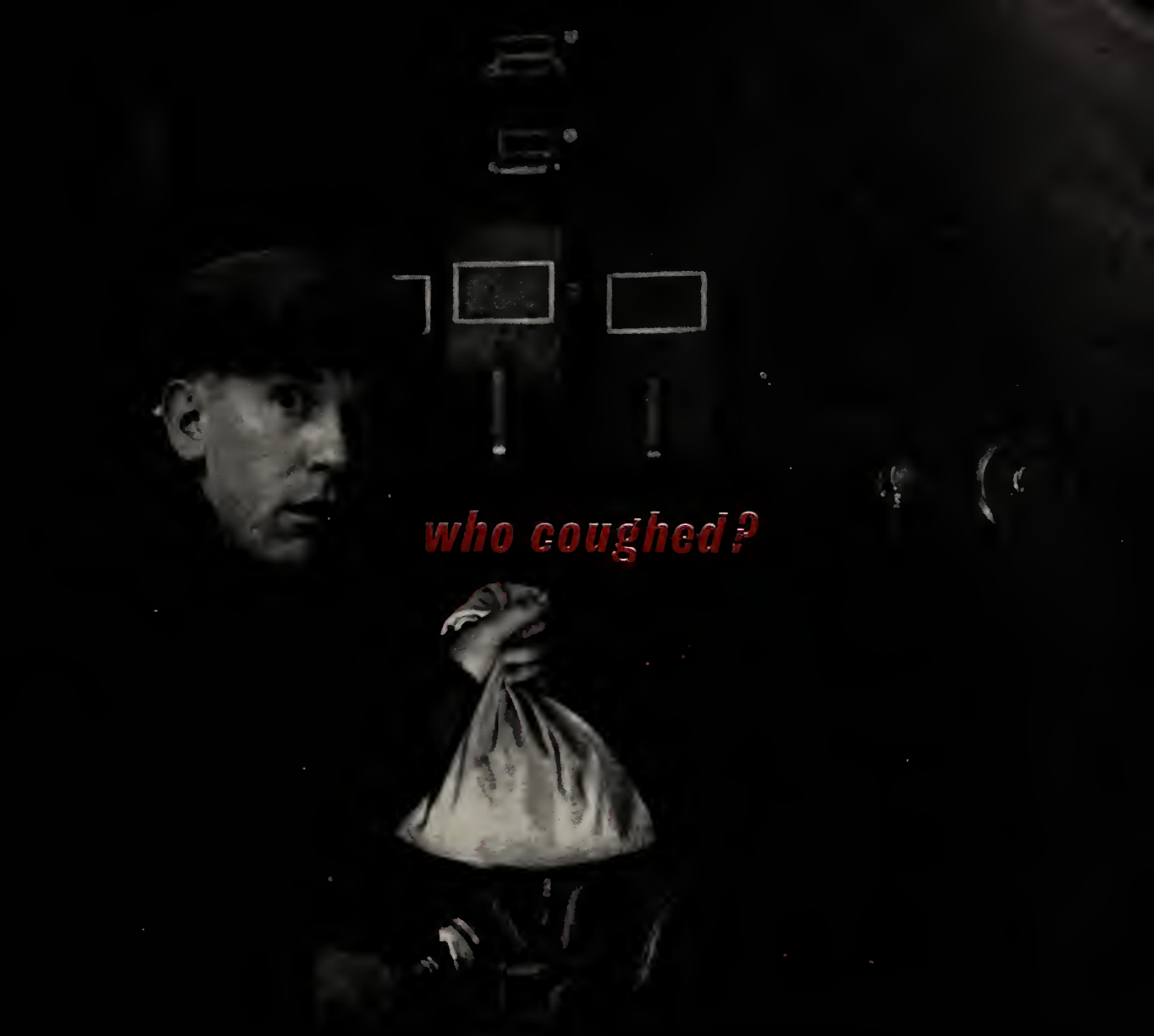
DECLOMYCIN®

DEMETHYLCHLORTETRACYCLINE HCl

Effective in a wide range of everyday infections — respiratory, urinary tract and others — in the young and aged — the acutely or chronically ill—when the offending organisms are tetracycline-sensitive.
Side Effects typical of tetracyclines which may occur: glossitis, stomatitis, proctitis, nausea, diarrhea, vaginitis, dermatitis, overgrowth of nonsusceptible organisms. Also: photodynamic reaction (making avoidance of direct sunlight advisable) and, very rarely, anaphylactoid reaction. Reduce dosage in impaired renal function. The possibility of tooth discoloration during development should be considered in administering any tetracycline in the last trimester of pregnancy, in the neonatal period, and in early childhood. *Capsules*, 150 mg. and 75 mg. of demethylchlortetracycline HCl. *Average Adult Daily Dosage:* 150 mg. q.i.d. or 300 mg. b.i.d. 1. Kunin, C. M.; Dornbush, A. C., and Finland, M.: Distribution and Excretion of Four Tetracycline Analogues in Normal Young Men. *J. Clin. Invest.* 38:1950 (Nov.) 1959.

LEDERLE LABORATORIES • A Division of AMERICAN CYANAMID COMPANY, Pearl River, New York
7517-3

Lederle



for fast and long-lasting cough control

HYCOMINE SYRUP

Each teaspoonful (5 cc.) contains:

Hycodan®	
Hydrocodone bitartrate . . 5 mg.	
(Warning: May be habit-forming)	6.5 mg.
Homatropine methylbromide 1.5 mg.	
Pyrilamine maleate	12.5 mg.
Phenylephrine hydrochloride	10 mg.
Ammonium chloride	60 mg.
Sodium citrate	85 mg.

in a highly palatable, cherry-flavored vehicle (methylparaben 0.13% and propylparaben 0.02% as preservatives)

INDICATIONS: For both productive and nonproductive cough. For relief of symptoms in tracheitis, bronchitis, pneumonia, pharyngitis, bronchial asthma, pertussis, and allied conditions; cough associated with allergy; in general, whenever cough medication is indicated.

DOSAGE: Average adult dose—1 teaspoonful after meals and at bedtime with food. Children 6 to 12 years, ½ teaspoonful; 3 to 6 years, ¼ teaspoonful; 1 to 3 years, 10 drops; 6 months to 1 year, 5 drops; after meals and at bedtime. On oral Rx where state laws permit. U.S. Pat. 2,630,400.

CAUTION: Should be used with caution in patients with known idiosyncrasies to phenylephrine HCl and in patients with moderate or severe hypertension, hyperthyroidism or advanced arteriosclerosis. In these patients use should not exceed three days. Hycomine Syrup is generally well tolerated but in some patients drowsiness, dizziness or nausea may occur. May be habit-forming.

Endo

Literature on request

ENDO LABORATORIES Richmond Hill 18, New York

reduce or obviate the need for transfusions and their attendant dangers

KOAGAMIN is indicated whenever capillary or venous bleeding presents a problem.

KOAGAMIN has an outstanding safety record -- in 25 years of use no report of an untoward reaction has been received; however, it should be used with care on patients with a predisposition to thrombosis.



KOAGAMIN®

parenteral hemostat

Each cc contains: 5 mg. oxalic acid, 2.5 mg. malonic acid, phenal 0.25%; sodium carbonate as buffer.

Complete data with each 10cc vial. Therapy chart on request.

Chatham CHATHAM PHARMACEUTICALS, INC.
Newark 2, New Jersey
Distributed in Canada by Austin Laboratories, Ltd. • Paris, Ontario



Protects your angina patient better than vasodilators alone

'Miltrate' contains both pentaerythritol tetranitrate, which dilates the patient's coronary arteries, and meprobamate, which relieves his anxiety about his condition. Thus 'Miltrate' protects your angina patient better than vasodilators alone.

Pentaerythritol tetranitrate may infrequently cause nausea and mild headache, usually transient. Slight drowsiness may occur with meprobamate and, rarely, allergic reactions. Meprobamate may increase effects of excessive alcohol. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction. Like all nitrate-containing drugs, 'Miltrate' should be given with caution in glaucoma.

Dosage: 1 or 2 tablets *before meals* and at bedtime. Individualization required.
Supplied: Bottles of 50 tablets.

CML-9646

Miltrate®

meprobamate 200 mg.+ pentaerythritol tetranitrate 10 mg.

WALLACE LABORATORIES / *Cranbury, N. J.*



In Chronic Illness: B and C vitamins are therapy

An imbalance of water-soluble vitamins and chronic illness often go hand in hand. STRESSCAPS, containing therapeutic quantities of vitamins B and C, is formulated to meet the increased metabolic demands of patients with physiologic stress. In chronic illness, as with many stress conditions, STRESSCAPS vitamins are therapy.

Each capsule contains:

Vitamin B_1 (Thiamine Mononitrate)	10 mg.
Vitamin B_2 (Riboflavin)	10 mg.
Niacinamide	100 mg.
Vitamin C (Ascorbic Acid)	300 mg.
Vitamin B_6 (Pyridoxine HCl)	2 mg.
Vitamin B_{12} Crystalline	4 mcgm.
Calcium Pantothenate	20 mg.

Recommended intake: Adults, 1 capsule daily, for the treatment of vitamin deficiencies. Supplied in decorative "reminder" jars of 30 and 100; bottles of 500.

STRESSCAPS®

FOR PROFESSIONAL RECOMMENDATION ONLY

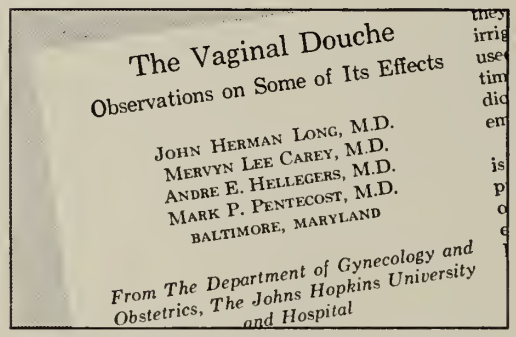
Stress Formula Vitamins Lederle

Lederle LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, N. Y.

7514-4

A Valuable Contribution To Medical Literature

A DEFINITIVE STUDY ON DOUCHING



The Vaginal Douche

Observations on Some of Its Effects

JOHN HERMAN LONG, M.D.
MERVYN LEE CAREY, M.D.
ANDRE E. HELLEGERS, M.D.
MARK P. PENTECOST, M.D.
BALTIMORE, MARYLAND

From The Department of Gynecology and Obstetrics, The Johns Hopkins University and Hospital

A SEARCH OF MEDICAL LITERATURE REVEALS NO COMPARABLE OBJECTIVE EVALUATION OF THE SUBJECT.

The authors state at the outset,

"Each physician has his own idea of the value or harm of the vaginal douche and many have expressed such ideas in writing. Such opinions have been arrived at without any intensive investigation or observation of subjects using douches as compared to those not using them. The purpose of this study is to report our observations on three groups of patients, one taking no douches, a second douching with a medicated solution* and a third douching with plain water."[1]

1. West. J. Surg., Obsts. & Gynec.: *71*:122-127, 1963

*The medicinal powder used in this study was META CINE®, a scientifically formulated preparation containing: papain, lactose, citric acid, methyl salicylate, eucalyptol, menthol and chlorothymol.

OBSERVATIONS BASED ON EXTENSIVE AND THOROUGH EXAMINATION SCHEDULE.

"One hundred patients were selected at random, regardless of their chief complaint, from the general population attending the Out-Patient Gynecology Clinic of The Johns Hopkins Hospital. Those selected were reexamined at 1, 3, 6, 9 and 12 months after the initial visit."

"At intervals patients were switched to the regimen of another group so that comparison of the effect of douching or not douching might be made in the same individual."

Three years were required to complete the study.

An evaluation of the objective findings of the study demonstrates that douching with META CINE® had the following effects on vaginal secretion:

- increased Doderlein organisms,
- proved effective in lowering WBC counts,
- proved effective in increasing glycogen content.

META CINE® was found to be a good antagonist to vaginal discharge and irritation—and also proved effective in reducing cervicitis.

No untoward effects of douching were encountered in the study.

Reprints of the complete study and professional samples of Meta Cine are available on request.

BRAYTEN PHARMACEUTICAL COMPANY • *Chattanooga 9, Tennessee*

cut Rx writing by 2/3 in colds, flu or grippe

NAME _____

ADDRESS _____

℞

No need to write three separate prescriptions for antitussive, decongestant and analgesic relief of common cold, flu or grippe symptoms when it is therapeutically correct... economically sound... to specify

ANTITUSSIVE/DECONGESTANT/ANALGESIC 'EMPRAZIL-C'® TABLETS

Each tablet contains:

Codeine Phosphate*	15 mg.
'Sudafed'® brand Pseudoephedrine Hydrochloride	20 mg.
'Perazil'® brand Chlorcyclizine Hydrochloride	15 mg.
Phenacetin	150 mg.
Aspirin	200 mg.
Caffeine	30 mg.

*Warning—may be habit forming

'Emprazil-C' Tablets are available on prescription only.

Dosage: Adults and children over 12 years—1 or 2 tablets—3 times daily as required. Children 6 to 12 years—1 tablet—3 times daily as required. **Caution:** While pseudoephedrine is virtually without pressor effect in normotensive patients, it should be used with caution in hypertension. Also, while chlorcyclizine has a low incidence of antihistaminic drowsiness, the usual precautions should be observed. **Supplied:** Bottles of 100 tablets.

Also available without codeine as 'EMPRAZIL'® TABLETS

Complete literature available on request from Professional Services Dept. PML.

BURROUGHS WELLCOME & CO (U.S.A.) INC.

Tuckahoe, N. Y.

Special cough formula for children

Pediacof®

Each teaspoon (5 ml.) contains codeine phosphate 5 mg., Neo-Synephrine® hydrochloride (brand of phenylephrine hydrochloride) 2.5 mg., chlorpheniramine maleate 0.75 mg. and potassium iodide 75 mg.

soothing decongestant and expectorant



bright red, pleasant-tasting, raspberry-flavored syrup

Pediacof is different. It is designed especially for children, and each ingredient is in the right proportion. The potassium iodide in Pediacof is so well masked that it is virtually unnoticeable. Children like the sweet raspberry flavor of bright red Pediacof.

Dosage: Children from 6 months to 1 year, ¼ teaspoon; from 1 to 3 years, ½ to 1 teaspoon; from 3 to 6 years, 1 to 2 teaspoons; and from 6 to 12 years, 2 teaspoons. These doses are to be given every four to six hours as needed.

How supplied: Bottles of 16 fl. oz.

Available on prescription only.
Exempt Narcotic.

Side effects: The only significant untoward effects that have occurred are mild anorexia and an occasional tendency to constipation. However, discontinuance of Pediacof has seldom been required. Mild drowsiness occurs in some patients but, when cough is relieved, the quieting effect of Pediacof is considered beneficial in many instances.

Precautions and contraindications: Patients with tuberculosis or those who are known to be sensitive to iodides should not be given Pediacof.

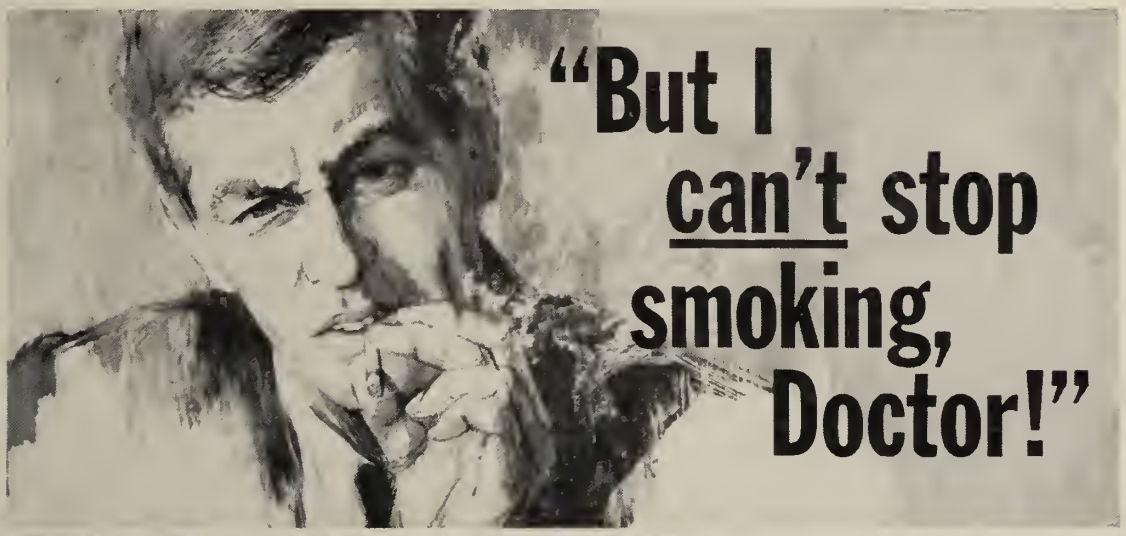
Caution should be exercised if Pediacof is administered to patients with cardiac disorders, hypertension or hyperthyroidism.

Warning: May be habit forming.

Winthrop Laboratories
New York, N.Y.

Winthrop

When your patient says:



"But I can't stop smoking, Doctor!"

Nikoban® PASTILLES

BRAND OF LOBELINE SULFATE, MRT

help curb the smoking habit

- Help induce a feeling of satiety similar to that of tobacco because of lobeline's pharmacological relationship to nicotine.
- Permit the patient to indulge his oral fixation by substituting the NIKOBAN Pastille for tobacco.
- Utilize the anorexic effect of lobeline to help the patient who is driven to compulsive eating when he discontinues smoking.
- Encourage patient cooperation through pleasant taste.

Dosage and Administration: In order to obtain the maximum benefit, a NIKOBAN Pastille should be sucked slowly and taken according to the schedule below. Whenever possible a pastille should be taken after meals.

1st week: 1 pastille every 1 to 2 hours for a maximum of 12 pastilles daily. *2nd week:* 1 pastille every 3 hours. *3rd week:* 1 pastille every 4 hours. *4th week:* 1 pastille every 4 to 6 hours. *Thereafter* 1 pastille may be taken at infrequent intervals whenever necessary. In some instances there may at first be a slight astringent burr of the tongue and throat. This will usually disappear as treatment with NIKOBAN Pastilles progresses and is no cause for concern.

Caution: It is advisable neither to smoke nor to use a smoking deterrent during pregnancy.

Formulation: Each NIKOBAN Pastille contains 0.5 mg. lobeline sulfate in a pleasant tasting spiced-cherry base.

Availability: In packages of 50 pastilles.

References: 1. Goodman, L. S. and Gilman, A.: The Pharmacological Basis of Therapeutics, New York, Macmillan, 1960, Ed. 2, pp. 620-622; 2. Edmunds, C. W.: J. Pharmacol. and Exper. Therap., 1:27, 1909; 3. Hazard, R. and Savini, E. Gand., 92:471, 1963. 4. Dorsey, J. L.: Ann. Int. Med., 10:628, 1936; 5. Rasmussen, K. B.: Ugeskr.laeger, 118:222, 1956; 6. Ejrup, B.: Sven. lak. Tid., 53:2634, 1956; 7. Jochum, K. and Jost, F.: Munch. med. Wchnschr., 103:618, 1961; 8. Jost, F. and Jochum, K.: Med. Klin., 54:1049, 1959; 9. Smoking and Health, Summary and Report of the Royal College of Physicians of London on Smoking. New York, Pitman, 1962.

M. R. THOMPSON, Inc., Medical Department- BB
711 Fifth Avenue, New York, New York 10022

Gentlemen:
Please send me a trial supply of NIKOBAN Pastilles.

NAME _____ M.D.

ADDRESS _____

CITY _____ ZONE ____ STATE _____

TYPE OF PRACTICE _____

M. R. THOMPSON, INC. • NEW YORK, NEW YORK 10022



who were the "untreatables"?

From their inception with cortisone, to the present-day variants of the steroid molecule, the corticosteroids have presented a therapeutic paradox. The beneficial action against inflammation and allergy as well as several undesirable metabolic effects are all, apparently, the results of the same basic physiologic action.[1]

Some of these associated metabolic reactions made it risky or otherwise undesirable to treat with steroids large numbers of patients in various categories who would otherwise have benefited from such management. These "untreatables" were overweight, had cardiac disease, hypertension, or pulmonary fibrosis associated with congestive heart failure. Also in this category were those patients whose emotional symptoms were aggravated by earlier steroids.

But the advent of ARISTOCORT® Triamcinolone in 1958—the result of biochemical and pharmacologic research which successfully stripped away many important undesirable hormonal effects from the primary anti-inflammatory action—dramatically changed this picture. This steroid did not overstimulate the appetite, or cause the excessive weight gain induced by other steroids;[2-7] it proved to have one of the best records of any steroid for *not* causing edema, or salt-and-water retention;[2,3,7-10] and the incidence of undesirable euphoria with this agent was remarkably low.[2,4,5,9,10] What is most significant is that these benefits have stood the test of more than 5 years of widespread use. And, of course, the avoidance of these distressing hormonal effects benefited *all* patients requiring steroids, not just those in the special categories, as demonstrated by wide clinical use.

Side Effects. Since it may, under some circumstances, produce any of the unwanted effects common to all cortisone-like drugs, discrimination should always be exercised in administering ARISTOCORT® Triamcinolone. Any of the Cushingoid effects are possible, as are purpura, G.I. ulceration, increased intracranial pressure and subcapsular cataract. Corticosteroids generally may mask outward signs of bacterial or viral infections. Catabolic effects to watch for include muscle weakness and osteoporosis. Weight loss may occur early in treatment but is usually self-limiting.

Contraindications. While the only absolute contraindications are tuberculosis and herpes simplex, there are some relative contraindications (peptic ulcer, glomerulonephritis, myasthenia gravis, osteoporosis, fresh intestinal anastomoses, diverticulitis, thrombophlebitis, psychic disturbance, pregnancy, infection) to weigh against expected benefits.

While no steroid can *cure* a susceptible disorder, many patients who would otherwise be confined in a state of invalidism have, on ARISTOCORT® Triamcinolone, been able to pursue active, useful lives.

References: 1. Levine, R.: Rationale for the Use of Adrenal Steroids, Paper presented at Annual Convention, Medical Society of the State of New York, New York, May 13-17, 1963. 2. Hollander, J. L.: Clinical Use of Dexamethasone. *JAMA 172*:306 (Jan. 23) 1960. 3. Boland, E. W.: Chemically Modified Adrenocortical Steroids. *JAMA 174*:835 (Oct. 15) 1960. 4. McGavack, T. H.: The Newer Synthetic Adrenocortical Steroids in Therapy. *Nebraska Med. J. 44*:377 (Aug.) 1959. 5. Freyberg, R. H.: Berntsen, C. A., Jr., and Hellman, L.: Further Experiences with Δ1, 9 Alpha Fluoro, 16 Alpha Hydroxyhydrocortisone (Triamcinolone) in Treatment of Patients with Rheumatoid Arthritis. *Arthritis Rheum. 1*:215 (June) 1958. 6. Cahn, M. M. and Levy, E. J.: Triamcinolone in the Treatment of Dermatoses. *Amer. Practit. 10*:993 (June) 1959. 7. AMA Council on Drugs: New and Nonofficial Drugs. *JAMA 169*:255 (Jan. 17) 1959. 8. McGavack, T. H.; Kao, K.-Y. T.; Leake, D. A.; Bauer, H. G., and Berger, H. E.: Clinical Experiences with Triamcinolone in Elderly Men. *Amer. J. Med. Sci. 236*:720 (Dec.) 1958. 9. Fernandez-Herlihy, L.: III. Use and Abuse of Corticosteroid Therapy—The Structure and Biologic Activity of the Corticosteroid Hormones and ACTH, *Med. Clin. N. Amer. 44*:509 (Mar.) 1960. 10. McGavack, T. H.: Triamcinolone: A Potent Anti-inflammatory Sodium Excreting Adrenosteroid. *Clin. Med. 6*:997 (June) 1959.

maximum steroid benefit—minimum steroid penalty

Aristocort®
Triamcinolone
1 mg., 2 mg. or 4 mg. tablets

Lederle LEDERLE LABORATORIES • A Division of AMERICAN CYANAMID COMPANY, Pearl River, New York
229-3

"They keep saying I'm sloppy!"



Nicozol® helps you restore your geriatric patients' interest in themselves

NICOZOL therapy can help you brighten the outlook of your aging patients who tend towards (1) untidiness, (2) irritability, (3) incompatibility, (4) lack of interest, and (5) loss of memory or alertness.

The NICOZOL formula helps improve mental acuity, increase the supply and use of oxygen in the brain, improve peripheral circulation—without excitation, depression, or other untoward effects.

NICOZOL can help you keep your aging patients actively alert and at ease with themselves, their families, and others.

Supplied: NICOZOL tablets (and capsules) in bottles of 100 and 1000. NICOZOL elixir in pints and gallons.

Precautions: May produce overstimulation in high doses. Discontinue if muscular twitchings or clonic convulsions occur. The flush produced in sensitive individuals is transient and harmless.

Average Dose: 1 to 2 tablets (or capsules) 3 times a day. 1 teaspoonful elixir 3 times a day.

Formula: Each tablet or capsule contains:
Pentylenetetrazol.....100 mg.
Nicotinic Acid.....50 mg.
Each teaspoonful (5 cc.) elixir contains:
Pentylenetetrazol.....200 mg.
Nicotinic Acid.....100 mg.
(as the sodium salt)
Alcohol.....5%

HART | Division of A. J. Parker Co. LABORATORIES Bryn Mawr, Pa., Winston-Salem, N.C.

NICOZOL®



In Sprains, Strains and Muscle Spasm, 'Soma' Compound

numbs the pain...not the patient

A potent analgesic and a superior muscle relaxant

1. A sprain or fracture is not a big clinical problem—but it does hurt. And if there is housework to do and kids to mind, the patient needs something to numb the pain.

2. A.P.C. compounds have limited usefulness; and the patient can buy them without your prescription. Unfortunately, most of them are too mild to be effective for sprains—and more potent products too often make the patient feel 'dopey'.

3. 'Soma' Compound is ideal in these cases. Since it contains both 'Soma' (carisoprodol) and acetophenetidin it is both a potent analgesic and a superior muscle relaxant; it also contains caffeine to offset any drowsiness *("numbs the pain...not the patient")*.

4. Why not try 'Soma' Compound? Dosage is 1 or 2 tablets q.i.d. For more severe pain, try 'Soma' Compound + Codeine. Dosage: 1 or 2 tablets q.i.d.

5. Hypersensitivity to carisoprodol may occur rarely. Codeine may produce addiction, nausea, vomiting, constipation or miosis.

Soma® Compound

carisoprodol 200 mg., acetophenetidin 160 mg., caffeine 32 mg.

Soma® Compound + Codeine

carisoprodol 200 mg., acetophenetidin 160 mg., caffeine 32 mg., codeine phosphate 16 mg. (Warning—may be habit forming.)

®WALLACE LABORATORIES / *Cranbury, N.J.*

CSO-9193

ARTHRALGEN® helps fre





ARTHRALGEN®

Each tablet contains:

Salicylamide	250 mg.
Acetaminophen	250 mg.
Ascorbic acid (Vitamin C)	25 mg.

Arthralgen, a better-tolerated analgesic formulation of time-tested ingredients, works faster to free the arthritic from his pain without salicylate side effects. Since its analgesic components require no chemical conversion to act in the body, Arthralgen's pain relieving benefits are immediately available to provide a smoother, more rapid obtundation of pain than can be achieved with many true salicylates.

Arthralgen is especially useful for the prompt relief of early morning stiffness and pain with less risk of gastric irritation. And since Arthralgen contains no sodium it is safe for long-term use in arthritics who have other conditions which ne sitate sodium restriction.

ARTHRALGEN®-PR

Each tablet contains:

Salicylamide	250
Acetaminophen	250
Ascorbic acid (Vitamin C)	25
Prednisone	1

The basic Arthralgen formulation plus pre sone is indicated for patients who require ster Prednisone has three advantages over corti hydrocortisone, and ACTH. They are: (1) la sodium retention, (2) absence of increased p sium excretion, and (3) the unlikelihood of ste induced hypertension.*

BRIEF SUMMARY

Arthralgen and Arthralgen-PR are indicat the management of rheumatoid arthritis, a

rthritic joints from





y arthritis, rheumatoid spondylitis, osteoar-is, bursitis, fibrositis, and neuritis. Arthralgen be used for analgesia in colds, flu, and us myalgias.

AGE: One or two tablets four times a day. r remission of symptoms, dosage should be ced to the minimum maintenance level.

EFFECTS: Nausea, GI upset, or mild salicy- may rarely occur. Symptoms of hypercorticoid- dictate reduction of dosage of Arthralgen-PR.

CAUTION: Reduction in dosage of Arthral- PR given over a long period should be gradual, r abrupt.

NTRAINDICATIONS: Hypersensitivity to any edient.

with any drug containing prednisone, Arthral- PR is contraindicated, or should be adminis-tered only with care, to patients with peptic ulcer, tuberculosis, nephritis, diabetes mellitus, acute psychoses, Cushing's syndrome (or Cushing's disease), overwhelming spreading (systemic) infection, or predisposition to thrombophlebitis.

Arthralgen-PR is generally contraindicated in patients with uremia and viral infections, including poliomyelitis, vaccinia, ocular herpes simplex, and fungus infections of the eye. It is also contraindicated in patients with chicken pox or susceptible persons exposed to it.

SUPPLY: Arthralgen (white, scored) and Arthralgen-PR (yellow, scored) tablets are available in bottles of 100 and 500.

*Cohen, et al: J.A.M.A., 165:225, 1957.

A. H. ROBINS CO., INC.
RICHMOND, VIRGINIA



The discharged mental patient . . . and Thorazine®
brand of chlorpromazine

"The average practitioner is quite capable of handling the vast majority of ex-institutionalized patients by regulation of medication, reassurance, manipulation of the environment where necessary, and . . . other technics." Kline, N.S.: Postgrad. Med. 27:620 (May) 1960.

The family physician must often assume responsibility for the discharged mental patient. Thorazine (chlorpromazine, SK&F) can be a valuable adjunct to the continuing care of this patient, because it helps prevent relapses by insulating him from the impact of stressful experiences. For successful rehabilitation and prevention of rehospitalization, however, the former mental patient—and often his family—also needs the guidance and counsel of his physician.

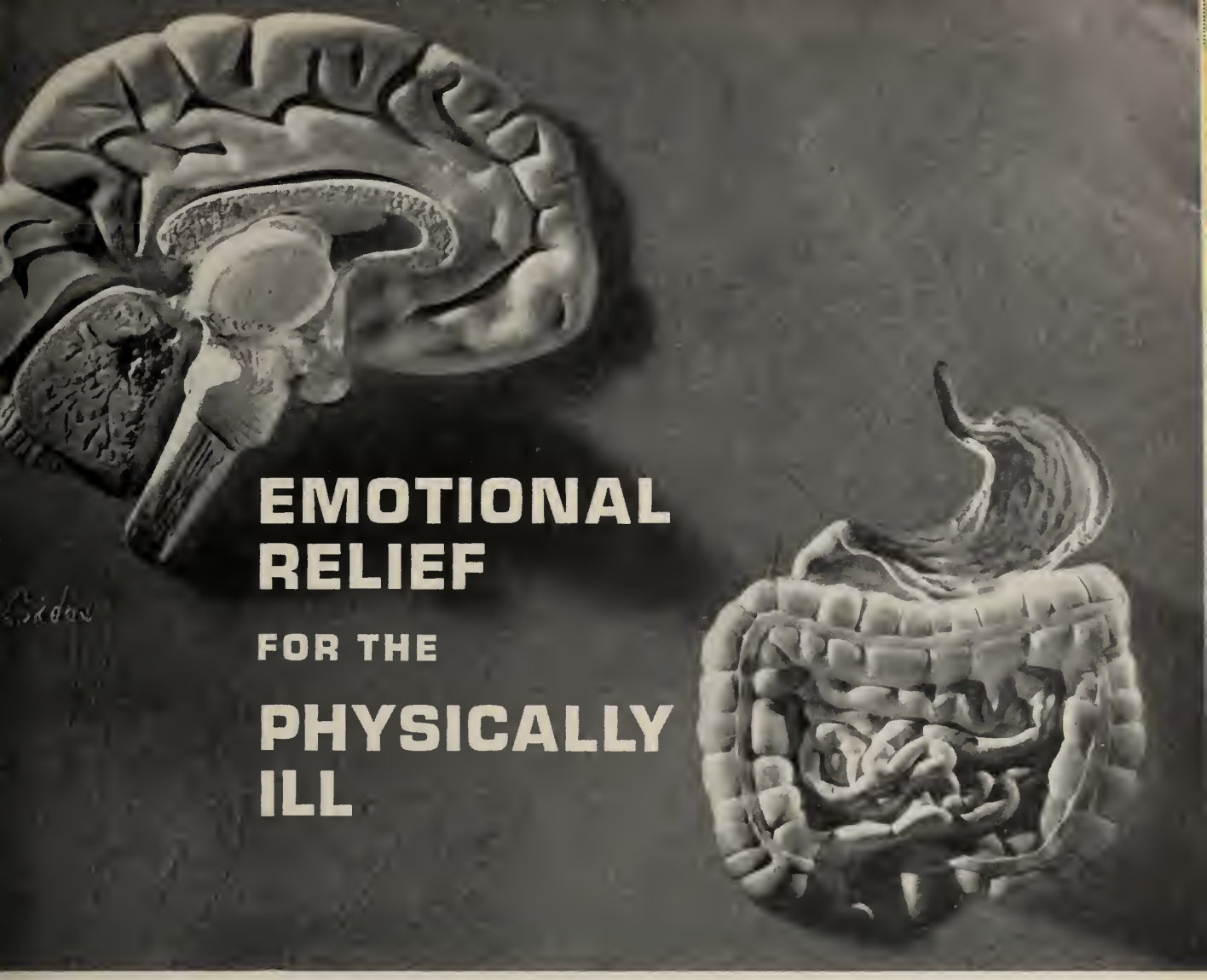
Many physicians are surprised by the high doses of Thorazine (chlorpromazine, SK&F) used in patients released to their care from mental hospitals. This surprise may be expressed by a drastic reduction in dosage "to play it safe"—with serious consequences for the patient.

The successful maintenance of former mental patients requires adequate, often "high" dosage, and often for prolonged periods of time. Fortunately, these dosages do not mean greater risks for the patient. On the contrary, there is much less risk of serious side effects once a patient has become gradually accustomed to Thorazine (chlorpromazine, SK&F)—*regardless of dosage*—over a period of a few months. Continuing therapy is almost always well tolerated, and is essential to most patients' continued well-being.

Brief Summary: Thorazine (chlorpromazine, SK&F) has been successfully used for 10 years in the treatment of mental and emotional disturbances, and has proven highly effective in the maintenance therapy of former hospitalized mental patients. *Principal side effects:* The most frequently encountered side effect is transitory drowsiness. Other occasional side effects include: dry mouth, nasal congestion, constipation, miosis, dermatological reactions, photosensitivity, jaundice, hypotension, increased appetite and weight; very rarely, mydriasis, agranulocytosis, extrapyramidal symptoms. *Contraindications:* Comatose states or in the presence of excessive amounts of C.N.S. depressants.

For complete prescribing information, please see *PDR* or available literature.

SK&F *Smith Kline & French Laboratories*



RELIEVES ANXIETY, APPREHENSION AND TENSION...



All day long

. . . keeps the patient calm, and the mind clear.



All night too

. . . aids restful sleep, with no barbiturate hangover.

MEPROSPAN®-400

(MEPROBAMATE 400 MG. SUSTAINED RELEASE)

Simplified, convenient dosage for emotional relief.

ide effects: 'Meprospan' (meprobamate, sustained release) s remarkably free of untoward reactions. Daytime drowsiness as not been reported. Rare allergic or idiosyncratic reactions ıay occur, generally developing after 1-4 doses of the drug.

'ontraindications: Previous allergic or idiosyncratic reactions ɔ meprobamate contraindicate subsequent use.

'recautions: Should administration of meprobamate cause rowsiness or visual disturbances, the dose should be reduced. Operation of motor vehicles or machinery or other activity equiring alertness should be avoided if these symptoms are resent. Effects of excessive alcohol may possibly be increased y meprobamate. Prescribe cautiously and in small quantities to patients with suicidal tendencies. Massive overdosage may produce lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction; withdraw gradually after prolonged use at high dosage.

Complete product information available in the product package, and to physicians upon request.

Usual adult dosage: One 400 mg. capsule or two 200 mg. capsules at breakfast; repeat with evening meal.

Supplied: 'Meprospan'-400 (meprobamate 400 mg.), 'Meprospan'-200 (meprobamate 200 mg.), each in sustained-release capsules. Both potencies in bottles of 30.

ME-805

WALLACE LABORATORIES *Cranbury, N. J.*

of every student and every member of the school's staff failed to reveal any additional active cases, either of the primary or reinfection type. A thorough epidemiologic investigation was in order.

Epidemiologic Investigation

Although remote, the possibility had to be considered that the antigen used for the skin tests had been contaminated. The concentrated Old Tuberculin material used by the local health departments is purchased from commercial sources by the State Health Department; it is diluted and bottled in the Central Laboratory and shipped to the local health departments. Thus, many different counties receive skin testing solution from the same lot of material. The experience of other counties with the same lots of antigen as that used in this county and handled the same way was within the expected range of reactors when classified by age group and reason tested. Therefore, contamination of the antigen was ruled out.

The technics used in giving and reading the skin tests were verified by one of us. Using the same methods but a different lot of antigen, the original reactions of 10 mm. or more were duplicated in 30 of 31 students picked at random for retesting. The reaction of the other student was read as 8 mm. instead of 10-plus on the retest. Thus, errors in technic were also ruled out.

With the validity of the skin tests established, further study of the situation was undertaken. The results of the tuberculin tests were tabulated according to class and sex, as shown in table 1. The freshman class had the highest percentage of reactors (48.6%) followed by the sophomore class (26.6%). The junior and senior classes had lower and almost equal percentages. Within the freshman class, 65.6% of the boys had significant reactions compared with 30.3% of the girls. These results are all consistent with the index case as the source of infection.

Table 1

Significant Tuberculin Reactors By School Class and Sex

Class and Sex	Number Tested	Positive Reactors 10 mm. and Over Number	Per Cent
Total Students	875	274	31.3
Freshman Class	315	153	48.6
Girls	152	46	30.3
Boys	163	107	65.6
Sophomore Class	241	64	26.6
Girls	115	24	20.9
Boys	126	40	31.7
Junior Class	165	29	17.6
Girls	80	14	17.5
Boys	85	15	17.6
Senior Class	154	28	18.2
Girls	92	12	13.0
Boys	62	16	25.8

To summarize the overall effect of this active tuberculosis case on the tuberculin sensitivity of the student body, the pupils were divided into three groups according to degree of school contact with the index case. These groups are as follows:

Group 1. Casual Contact: students having no classroom, homeroom or school bus exposure to the index case.

Group 2. Moderate Contact: students who attended one class and/or study hall with the case.

Group 3. Close Contact: students exposed to the case in the homeroom, school bus, or two or more classrooms.

The percentage of significant reactors increased as the opportunity for exposure increased (table 2). Nine of every 10 children in close school contact with the index case had a tuberculin reaction of 10 mm. or more of induration.

Table 2

Significant Tuberculin Reactors According to Degree of School Contact

Degree of Contact	Number Tested	Positive Reactors 10 mm. and Over Number	Per Cent
Total	875	274	31.3
Casual School Contact	550	114	20.7
Moderate School Contact	243	86	35.4
Close School Contact	82	74	90.2

As a further check on the effect of this case of tuberculosis on the school population, an attempt was made to rule out other contact with tuberculosis. From each of the three school contact groups a random sample of 60 students was selected, without regard to tuberculin reaction. Each of these 180 students was given a questionnaire which requested information from his parents regarding the student's present household contact with tuberculosis, any previous household contact and visiting relative or close neighbor contact. One hundred fifty-nine of the 180 students selected

returned the completed questionnaires. The contact history of these three groups of students is shown in table 3. After subtracting from the study group the students reporting household or other outside contact with tuberculosis, the percentage of reactors in each of the three groups was not appreciably affected. Thus, the high percentage of significant tuberculin reactors in this school population cannot be explained on the basis of additional exposure outside of the school.

Table 3

Influence of Other Contact on Tuberculin Sensitivity of Sample of Three Groups of Students

Type of Contact	Number Tested	Positive Reactors 10 mm. and Over Number	Per Cent
Casual School Contact	55	13	23.6
Other Contact	6	—	—
No Other Contact	49	13	26.5
Moderate School Contact	54	17	31.5
Other Contact	8	1	12.5
No Other Contact	46	16	34.8
Close School Contact	50	44	88.0
Other Contact	10	10	100.0
No Other Contact	40	34	85.0

The possibility was considered that the index case and the high level of tuberculous infection in the school all resulted from exposure to a common source. This can be ruled out, however, on consideration of the date of onset of illness in the index case and the period of time in which many students were shown to have developed tuberculin sensitivity. When the sophomore class was tested in December the percentage of students having significant reactions was less than 3 per cent. Had there been a common source of infection for both the index case and the remaining students, evidence of it would have been expected during the fall testing program since the case's symptoms began in October.

On the basis of the epidemiologic findings —the increasing high percentage of reactors as association with the index case increased and the absence of any unusual outside contact with tuberculosis—and with technical errors ruled out, it was concluded that this was an air-borne outbreak of tuberculous infection and that one case of far advanced tuberculosis was responsible for the unusually high level of tuberculin sensitivity among the student body of this high school and for the high rate of conversion to tuberculin sensitivity among students with previous negative reactions.

Development of Clinical Tuberculosis

Since none of the children with tuberculin reactions was given isoniazid, there was an opportunity to continue the investigation and determine the further effect of the index case on his school associates. The records were checked one year later for possible cases of reinfection type tuberculosis among the students who had been in school at the time of the original investigation. It was learned that his sister and 5 other members of the student body had developed clinical tuberculosis during the year. Excluding the sister, this corresponds to an attack rate of 570 per 100,000 population. For the state of Tennessee the reported case rate of active tuberculosis among young persons 15 to 24 years of age was 25 per 100,000 population per year for the period 1960-1962. Even if the reported case rate is only one-half of the actual rate for that period, the attack rate in this group of students was 10 times higher than that of the general population.

The 5 students who developed tuberculosis were studied according to degree of school contact with the index case and attack rates computed, as shown in table 4.

Table 4

Tuberculosis Attack Rates According to Degree of School Contact

Degree of School Contact	Number of Students	New Cases	Rate per 1,000
Total	875	5	5.7
Casual Contact	550	1	1.8
Moderate Contact	243	3	12.3
Close Contact	82	1	12.2

One of the patients had had only casual school contact with the index case, 3 had had moderate school contact and one had had close school contact. The attack rate among the 550 students who had casual contact with the index case was 2 per 1,000; for those with moderate or close contact the attack rate was 12 per 1,000. The student with casual contact who developed clinical disease had previously had visiting contact with a double first cousin who was ill with tuberculosis. This may have been

an additional factor in the development of that case. No outside contact could be found in the other 4 cases.

The long-term study of tuberculosis which was conducted in Williamson County, Tennessee, among persons exposed at home to a case of tuberculosis, affords an opportunity to assess the relative level of the attack rate among these children exposed at school. According to the Williamson County material, white household associates 15 to 24 years of age who were exposed at home to a sputum-positive index case experienced an average attack rate of 9.5 per 1,000 per year during the first 18 years of the study.[1] For the students who had moderate or close school contact, the attack rate was 12 per 1,000. Thus, these children who had classroom contact with an advanced case suffered an attack rate equal to that of household associates of open cases.

The attack rates observed in this high school follow the epidemiologic pattern observed in families of white tuberculous patients in Williamson County. There the age groups at greatest risk of developing tuberculosis were under 5 years of age and 15 to 34 years of age. Another significant finding was the relationship of age at first exposure to attack rates in children of tuberculous parents.[2] When children were exposed at home during the critical ages of under 5 years and 15 to 34 years, the attack rates rose abruptly. There was a lag in the attack rate of children exposed between the ages of 5 and 15 years. These high school children were exposed at school to an open case at a highly susceptible and critical age. The attack rate rose abruptly to a high level.

Comment

With the reduction in tuberculosis mortality and decreased incidence of the disease there is an increasing proportion of young people in the population who have never been exposed to the tubercle bacillus. Thus, the potential for explosive outbreaks of infection and of disease such as the one described here is great. Even though mortality from tuberculosis has been reduced greatly in the younger age groups, with a resultant shift in the distribution of cases toward the older age groups, the younger segment of the population should not be forgotten in our control and surveillance programs. This is true not only because other outbreaks in schools will occur but also because this group presents a great opportunity to study the epidemiologic pattern of tuberculosis. Prior to the present low level of tuberculin sensitivity in the population, this episode probably would have gone undetected.

Summary

Following the discovery of a far advanced active case of tuberculosis in a pupil in a high school with an enrollment of 940 students, it was found that 31.2% of the students had significant tuberculin reactions and that among his close school contacts the rate was 90 per cent. The epidemiologic investigation revealed no other sources of contact with the disease and points to airborne spread in the school environment.

Six members of the student body, including the sister of the index case, developed reinfection type tuberculosis following exposure at school to the index case. The attack rate among the students who had classroom contact with the index case is equal to that of young persons 15 to 24 years of age who had household exposure to an open case.

Until tuberculosis is eradicated, or until more is learned concerning the epidemiology of this disease, continued rigid control measures, even in the younger segments of the population, seem indicated.

Acknowledgment is made of the valuable assistance of the local health department and of the school officials of the county concerned. Without their aid and cooperation this investigation would not have been possible. The interest and assistance of the late Dr. R. S. Gass and the staff of the Division of Tuberculosis Control of the Tennessee Department of Public Health contributed greatly to the successful completion of the study.

References

1. Puffer, R. R., Zeidberg, L. D., Dillon, A., Gass, R. S., and Hutcheson, R. H.: Tuberculosis Attack and Death Rates of Household Associates, *Am. Rev. Tuberc.* 65:111, 1952.

2. Zeidberg, L. D., Dillon, A., and Gass, R. S.: Risk of Developing Tuberculosis Among Children of Tuberculous Parents, *Am. Rev. Tuberc.* 70:1009, 1954.

The author illustrates the successful management of seriously ill patients by this surgical attack.

One Stage Total Coloproctectomy And Ileostomy For Ulcerative Colitis*

JACK GREENFIELD, M.D., Memphis, Tenn.

Where there is universal involvement of the colon and rectum by ulcerative colitis, and surgery becomes necessary, then one-stage total coloprotectomy and ileostomy is the operation of choice providing the patient can withstand the procedure.[1-4]

Indications for surgery include chronic or fulminating disease and bleeding which do not respond to good medical management, perforation of the colon, obstruction, intraabdominal or rectal fistula formation, development of polyps or pseudopolyps, malignancy, or severe mental depression. (Table 1.) There are other indications besides these [1-4,16]

Table 1
Indications For Surgery

1. Chronic or fulminating disease unresponsive to therapy.
2. Uncontrolled hemorrhage.
3. Perforation.
4. Obstruction.
5. Fistula formation, intra-abdominal or rectal.
6. Polyp or pseudopolyp formation.
7. Malignant disease.
8. Mental depression.

When surgery has been elected and the feasibility of the one-stage procedure is anticipated, carefully planned preoperative preparation is important, and consists of the following: (1) If time permits, a Miller-Abbott tube should be inserted to the 4-foot mark for intestinal decompression and to decrease the bulk of intestine to be manipulated during surgery; (2) Intestinal asepsis should be produced with an enteric antibiotic; (3) A nonresidue diet as for other operations on the colon, is prescribed. (The long intestinal tube does not interfere with diet or oral medication, since suction is not necessary after it has passed the duodenum unless obstruction is present); (4) Indicated electrolytes, fluids, protein and blood are administered; (5) If the patient has been receiving corticotropin or corticosteroid therapy it should be continued through the immediate preoperative period and gradually withdrawn in the postoperative period.[5,9] (6) At least 2 liters of blood should be available for the operation. (7) Previous to operation, a Foley retention catheter is inserted into the bladder.

For the operative procedure (table 3), the patient is placed in the supine position with the knees flexed and the feet taped to a cut-out extension on the operating table so that the position will not have to be changed or the patient moved during the procedure. A polythylene catheter in a vein or a cut-down for the intravenous therapy during the operation is preferable to the size of needles which may become blocked or slip out at inopportune times. It is important to insert a well-lubricated, large-bore rectal tube high into the rectum for later use in decompressing the thinned-out, friable colon. The position for the ileostomy ring is marked on the abdomen, located in such a manner that it will not impinge upon boney prominences or the umbilicus. Adequate exposure may be obtained with a long left paramedian abdominal incision. Following gentle exploration, an important step is to empty the gas and liquid from the friable, thinned-out, dilated colon through the previously placed rectal tube. In this manner the possibility of perforation and spillage from handling the diseased colon will be markedly reduced. It has been found easier to mobilize the transverse colon first, then the right colon, the left colon, and finally the splenic flexure, carefully avoiding the ureters as the vessels are divided. The abdominal portion of the abdominoperineal

*From the Department of Surgery, University of Tennessee Medical Units, Memphis, Tenn.

resection is then completed as far as possible, staying close to the rectal wall unless carcinoma is present. Impotence and sterility, particularly in males, are avoided by staying close to the rectal wall.[11-12] One inch wafers of skin and peritoneum are excised in the center of the location previously marked for the ileostomy ring. The ileum is divided proximal to the area of disease and two inches of the proximal end is brought out through the split muscle. The ileostomy stoma is fashioned either by Brooke[13] or Turnbull[14] method. This results in a one-inch protusion of the ileostomy stoma. In the former the ileus is turned back and the mucosa sutured to the skin, while in the latter, the musculoserosal layer is removed and the mucosal layer turned back and sutured to the skin. By not exposing any serosa, serositis of the exposed loop with resulting ileus and electrolyte loss is prevented in contrast to the former types of ileostomy. Also, stricture of the stoma is minimized by these types of ileostomy. The mesentery of the ileal stoma loop is then sutured to the anterior parietal peritoneum without compromising the blood supply. In this manner loops of bowel are kept from being caught between the ileal loop and the abdominal wall postoperatively. The perineal excision of the rectum is meanwhile completed by the first assistant or another team. The levators may be approximated and the perineal wound drained. Finally, the abdomen is closed. The ileostomy ring and plastic bag** are applied in the operating room.

Postoperatively, broad spectrum antibiotics are administered. Decompression by the long intestinal tube and intravenous homeostasis are continued for three to five days until the ileostomy is functioning. The perineal packing or drains are gradually removed beginning about the third day. Often, the bladder catheter can be removed in 24 hours. The attending nurse and then the patient are taught the care of the ileostomy. Upon discharge from the hospital the patient is encouraged to join Q.T. Inc., an organization of individuals with ileostomy or colostomy stomas.[15]

**Manufactured by the Tarbot Company, Providence, Rhode Island.

The complications seem to be fewer than with less curative procedures.[4] (Table 2.)

Table 2
Complications

1. Mortality 0-4%.
2. Fluid, electrolyte loss.
3. Peritonitis.
4. Ileus, obstruction.
5. Ileostomy fistula, stricture, retraction.
6. Delayed perineal wound healing.

The mortality is variously reported as from 2 to 4 per cent.[4,16] In the small group of cases herein reported, the mortality has been zero. With the Turnbull and Brooke types of ileostomy, fluid and electrolyte loss are minimal. If preoperative or operative spillage have taken place peritonitis may occur, but should respond to the usual means, since the source of the contamination has been removed. Ileus which persists beyond the usual 3 to 5 days is usually secondary to peritonitis or to the irritation from the large raw surfaces and should respond to tubal decompression. The threat of obstruction of the small intestine is minimized by adequate approximation of the distal ileal loop mesentery to the anterior abdominal wall up to the level of the stoma. This also decreases the chance of retraction of the stoma. With the above types of ileostomy, fistula and stricture of the stoma are infrequent. The opening of the applied prostheses must be of adequate size and so placed as not to press upon the protruding stoma. When edema of the stoma subsides rings with smaller internal openings are employed. A common complication is delayed perineal healing.

Case Reports

Seven cases are presented in which one stage pancolectomy and ileostomy were employed.

Case 1. A 23 year old white woman began to have cramping and diarrhea, with blood and mucus in the stools, in 1953. In 1954, the diagnosis of ulcerative colitis was established. She developed amenorrhea, lost considerable weight, developed perianal fistulas and mental depression. She was hospitalized for prolonged periods on several occasions, responding to corticotropin and corticosteroid therapy well at first, but later with less effect. She was admitted to the St. Joseph Hospital on Sept. 8, 1956.

She had fever, weighed 92 lbs., was nervous and depressed. She was having about 12 stools

daily. The skin and sclerae were pale. There were several rectocutaneous fistulas draining mucoid material. The vaginal orifice and anal region were indurated and inflamed. The abdomen was scaphoid and tender.

There was mild albuminuria and ketonuria, and the PCV. was 34%. The serum electrolyte pattern had been corrected to normal. Barium enema showed involvement of the entire colon, and sigmoidsocopic examination revealed marked rectal involvement.

Blood was given to correct anemia and she was prepared for operation. On Sept. 11, the described procedure was performed. The distal 25 cm. of ileum was grossly involved and therefore was removed. A Turnbull type ileostomy was fashioned in this instance.

The entire specimen, including the removed ileum was involved in the ulcerative process (Fig. 1). No tuberculosis or malignancy was found.

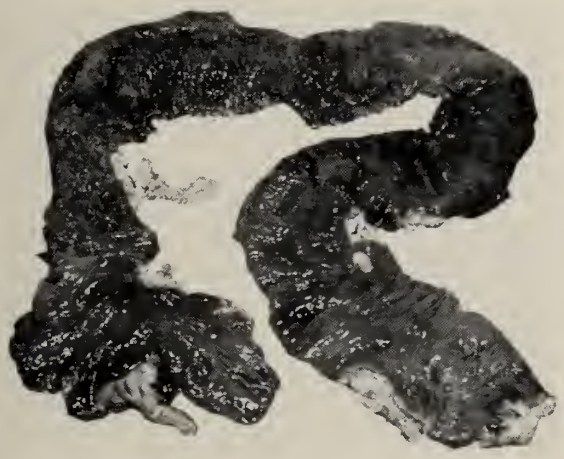


Fig. 1. (Case 1.) Surgical specimen.

The postoperative course was uneventful. On Sept. 22, 1956 she was discharged weighing 83 lbs. and caring for the ileostomy herself (Fig. 2).



Fig. 2. (Case 1.) Plastic ileostomy bag in place.

One month later she weighed 98 lbs. and her mental outlook was good. The ileostomy was functioning well (Fig. 3). In November of that



Fig. 3. (Case 1.) Ileostomy stoma one month after operation.

year she was menstruating again and the perineal wound had healed.

However, in Dec. 1957 she developed inflammation of the ileostomy stoma, and did fairly well on corticotropin until Jan. 2, 1959, when she developed fever, anorexia, and a tender mass in the lower abdomen. She lost weight. An abdominal abscess drained on Jan. 7, 1959. *Esch. coli aerogenes,* sensitive to nitrofurantoin (Furadantin), was cultured from the pus. Methylene blue given by mouth came through the drainage wound, establishing that there was an enterocutaneous fistula. She refused operation at that time and so was discharged from the hospital. She was re-admitted on Feb. 4, and 3 days later, after correction of anemia with blood, and successful intubation of the small intestine with a Miller-Abbott tube, she was operated upon. The gastrojejunocutaneous fistula which was resected. The stomach was repaired, the involved loop of jejuno-ileum was removed and continuity was reestablished by end-to-end anastomosis. The distal ileum and ileostomy stoma were resected and a Brooke type ileostomy established this time.

The specimen (jejunum) was reported as being involved in ulcerative enteritis with fistula formation. Again, the postoperative course was uneventful, and on Feb. 17, 1959 she was discharged from the hospital, healed, eating, and with the ileostomy functioning well. She has remained on corticotropin therapy and when last seen, May 31, 1963, was enjoying a restaurant meal with relatives.

Case 2. A 43 year old white woman began to have diarrhea and abdominal cramps in 1942. In 1944 she became seriously ill and a diagnosis of ulcerative colitis was established. She required

10 weeks' hospitalization during which she was given a number of transfusions because of blood loss in the stools. In 1951, and again in 1956 she was hospitalized for prolonged periods. During the previous admission she was placed on corticotropin therapy which she continued to take. In spite of excellent medical management she again began to have diarrhea, pain and weight loss. Her menses had ceased in 1955. She was admitted to the St. Joseph Hospital on Nov. 13, 1956.

There was low grade fever. The patient was nervous and depressed. The abdomen was tender, and there were marked external and internal hemorrhoids. Weight was 99 lbs. and she was losing her hair. (ACTH effect?)

Barium studies showed a typical pipe-like colon, and sigmoidoscopy revealed marked rectal involvement. There was a leucocytosis. The serum electrolyte pattern was essentially normal.

After preparation, operation was performed November 16, as described. A Turnbull type ileostomy was fashioned in this instance. The specimen showed universal ulceration with pseudopolyp formation in some areas. No tuberculosis or malignancy was found. (Fig. 4.)



FIG. 4. (Case 2.) Surgical specimen.

The postoperative course was entirely uneventful, and she was discharged from the hospital on Nov. 28 weighing 98 lbs. The abdominal incision had healed, and she was managing the ileostomy herself. The corticotropin therapy had been withdrawn, and in Feb. 1957 her hair, which had fallen out in handfuls while she was on corticotropin therapy, began to grow well, the menses had returned, she became cheerful. Her weight was 121 pounds. In Dec. 1957 she married a childhood sweetheart. In Dec. 1958 the perineal wound healed. At present she works as a doctor's assistant and must limit her diet to control weight.

Case 3. This 42 year old white man was troubled with abdominal distention, cramping, diarrhea, and fever for 3 years. In Feb. 1957, during a moderate attack, a diagnosis of ulcerative colitis was established by sigmoidoscopic examination, although barium studies of the colon were not diagnostic. The presence of a left-sided colon was the only positive x-ray finding. He was treated medically and appeared to do well; in April, 1956, he was hospitalized, critically ill with a fulminating exacerbation of the diarrhea, and peritonitis. He finally responded to corticotropin, antibiotics, intestinal decompression by long-tube and electrolyte replacement. After recovery, barium studies again were non-diagnostic and even this sigmoidoscopic examination was negative. In July 1956 he had an appendectomy. A type II malrotation of the midgut was confirmed, as well as thickening of the entire colon.

On about Oct. 3, 1956 he again developed diarrhea. A week later a perianal abscess developed and on Oct. 17, he was admitted to the St. Joseph Hospital in marked distress, thin, and with a doughy, tender abdomen. A right perirectal abcess was drained. He had a moderate alkalosis and low normal serum proteins.

In spite of large doses of corticotropin, low residue diet, antibiotics, fluid and electrolyte replacement therapy, he rapidly grew worse and became disoriented. The abdomen became more distended, with rebound tenderness throughout. The diarrhea was marked. On Oct. 20, because he was becoming worse under treatment, it was decided to operate before he deteriorated beyond relief.

After preoperative preparation as outlined above, he was operated upon Oct. 23. The colon had perforated in several areas and there was about 1000 cc. of bloody, foul, fecal fluid in the peritoneal cavity. The common, unattached mesentery for the large and small intestine comprising the midgut area was foreshortened and indurated. In spite of the peritonitis total coloprotectomy and ileostomy were performed as a life saving measure. During the procedure 2 liters of blood and 200 mg. of Solu-Cortef were given intravenously. The Turnbull type ileostomy was fashioned in this instance.

The specimen showed universal confluent ulceration throughout with multiple perforations. (Fig. 5.)

Postoperatively he did fairly well considering the findings at operation. A superficial abdominal wound infection with *Ps. aerugenosa* and *Esch. coli aerogenes,* sensitive to novobiocin, developed. The infection responded slowly. On Dec. 7, he was discharged from the hospital weighing 101 lbs. By April 1957 the perineum had healed. His outlook



FIG. 5. (Case 3.) Surgical specimen.

on life improved and he obtained a much better job than he had had before his illness. He remains well, weighing 150 lbs.

Case 4. A 20 year old white boy, had had attacks of abdominal cramping, fever and bloody diarrhea for 1½ years. He had been hospitalized for prolonged periods, several times critically ill, responding less each time to corticotropin and corticosteroid therapy. He became depressed and had marked personality changes. About Oct. 1, 1957, he had an exacerbation of the disease and rapidly lost about 35 pounds. When he was admitted to the St. Joseph Hospital on Oct. 11, he failed to respond to excellent medical management. On Oct. 17, the T. was 100° F., P. 120, and abdominal distention and generalized abdominal tenderness were present.

Barium enema had shown pseudopolypoid changes throughout the colon, and sigmoidoscopic examination rectal ulceration and inflammation. Cultures of the stool for dysentery bacilli and amebae were negative. There was a trace of albumin in the urine, the P.C.V. was 35.5% and there was a marked leucocytosis. The electrolyte pattern was normal because of therapy.

Because of the poor response to medical management, the polypoid changes, and the mental state, surgery was decided upon.

He was prepared and operated upon as described, on Oct. 24. The Brooke type of ileostomy was used in this case. At operation there was peritonitis and a perforation of the sigmoid.

The specimen showed generalized ulceration with marked pseudopolyp formation. (Fig. 6).

While in the recovery room he became violent as he was coming out of anesthesia, needed to be restrained, and thereby suffered a left upper brachial paralysis. On Nov. 2, dehiscense of the abdominal wound developed, requiring secondary closure.



FIG. 6. (Case 4.) Surgical specimen.

On Nov. 23, he was discharged from the hospital with his parents caring for the ileostomy, weighing 125 lbs. He received physiotherapy for the paralyzed extremity on an ambulatory basis and by Jan. 1958 the function in the left arm and shoulder had recovered so he was managing the ileostomy himself. Subsequently he indulged in strenous sport, attended the University of Illinois, obtained an engineering degree and became employed by Westinghouse Co. On July 5, 1963, weighing 207 pounds, he married a very charming young lady.

Case 5. This 28 year old woman, was admitted to the St. Joseph Hospital on June 13, 1960, because of bloody diarrhea of one week's duration, nausea and weakness. She had the onset of ulcerative colitis in 1956, following which she had to be hospitalized and be given transfusions ten times. In 1958 she had responded well to corticotropin therapy. She was married, but had no children. An appendectomy had been performed in 1951.

She was pale and was hypotensive; there was tenderness over the entire colon. The temperature was elevated. The admission P.C.V. was 26% and WBC count 3,000 with 43% P.M.N. Sigmoidoscopy showed marked rectal involvement by the disease.

While in the hospital this time, she was given transfusions, put on corticosteroids including corticosteroid enemas and other good supportive treatment. She continued to have a low grade fever, the P.C.V. rose to 45% by June 29, but the numerous stools continued, therefore on July 8,

operation was performed and a Brooke type ileostomy fashioned.

The surgical specimen showed acute and chronic ulcerative colitis. A portion of ileum was included. The appendix was absent.

The postoperative course was uneventful and she was discharged from the hospital on July 19, weighing 96 lbs. and managing the ileostomy herself. By Nov. 25, 1960, she weighed 116 lbs. and was living normally. When last seen in June, 1963, she was working in a responsible position.

Case 6. A 31 year old married woman, was readmitted to the St. Joseph Hospital on Oct. 26, 1960, for operation. She had had symptoms of ulcerative colitis for 4 years but a definitive diagnosis had not been made until 1959, the condition having been called spastic colon, irritable colon, etc., until that time.

She had repeated attacks of diarrhea, vomiting, fever, rectal bleeding and weight loss. She had been hospitalized three times in the previous 2 years. The last hospitalization in July 1960 was for 30 days, and she had been on large doses of corticosteroids since then. Her weight was 87 lbs., contrasted to her best weight of 135 lbs. She had had arthritis of the back, legs and left hand for the preceding year. Eighteen years previously she had an appendectomy. She had been married 13 years, had 2 children and her husband was living and well.

At this admission she had the painful joint areas mentioned above, was pale, had tenderness over the entire colon and there was a right McBurney scar. The P.C.V. was 33% and WBC count 9,400 with a normal hemogram. X-ray studies and sigmoidoscopy showed involvement of the colon and rectum by the disease.

She was prepared for operation on Oct. 29; a Brooke type ileostomy was fashioned in this instance.

The removed specimen showed universal ulcerative colitis, and enteritis in the resected ileum, reticulo-endothelial hyperplasia in 15 mesocolic nodes, and surgical absence of the appendix (Fig. 7).

The postoperative course was uneventful and she was discharged from the hospital on Nov. 9, managing the ileostomy, free of arthritic symptoms and weighing 89 lbs. By February 1961 she weighed 108 lbs. She continues to be well at this time.

Case 7. This 19½ year old man was admitted to the St. Joseph Hospital on Jan. 4, 1961 with a recurrent attack of ulcerative colitis and arthritis in the left knee and shoulder. In 1956 possible rheumatic fever was diagnosed, then amebic colitis, and finally in 1959 a diagnosis of ulcerative colitis was established. He had had two previous recent admissions because of similar episodes to this one, a perirectal abscess having been drained during the first of these. On about Jan. 12, he developed left temperomandibular arthritis, which responded to ACTH. He then began to have bloody diarrhea which recurred



FIG. 7. (Case 6.) Surgcial specimen.

several times while under medical treatment. He also developed a furuncle in the right posterior neck region. He was on large doses of corticosteroids, but continued to bleed.

When seen in consulation on Feb. 15, 1963, he had fever, rapid pulse, was pale, weak and thin and the abdomen was tender throughout. Also present were a perirectal fistula, a draining furuncle in the right neck region and the arthritis. He weighed 100 lbs.

The chest film was negative. Admission P.C.V. was 24%, rose to 38% following several transfusions, but was dropping again. The WBC count was 14,200 with 81% P.M.N. The urine had a specific gravity of 1.028 and contained 30 mg. albumin.

On Feb. 17, because of continued bleeding, an emergency operation was performed. A Brooke



FIG. 8. (Case 7.) Surgical specimen.

type ileostomy was fashioned. The specimen showed acute and chronic ulcerative colitis with reactive hyperplasia in the lymp nodes (Fig. 8).

Postoperatively, the corticotropin was continued, but gradually decreased in dosage. He developed a meatal stricture, which required dilations, and on Mar. 29, 1961, was discharged from the hospital with an P.C.V. of 43% and weighing 103 lbs. by April 17, 1961, the perineum was healed, he weighed 110 lbs. and was working.

Comments

Total coloproctectomy and ileostomy in one stage is not advocated as the only surgical treatment of ulcerative colitis.[17] I resected the descending and sigmoid colon for adenocarcinoma superimposed on chronic ulcerative colitis in a 61 year old negress in June 1959. This patient is still living and well. However, when the rectum is involved and operation becomes necessary, the described one-stage procedure would seem preferable. By this procedure, the morbidity resulting from retained diseased bowel as in lesser procedures, and the risk of multiple operations and anesthesia are avoided.[6,18] A further consideration is the considerable saving of money and time.

Patients appear to tolerate the procedure well, and upon recovery, are improved both physically and mentally.

The newer types of ileostomy have contributed a great deal to making such a procedure possible by reducing to a tolerable minimum the postoperative loss of electrolytes and fluids. Although some authors seem to believe it is no longer necessary, the patients of this report have inserted the gloved finger into the ileostomy stoma daily, to keep it open.[13,19] The problem of odor is eliminated, since the introduction of plastic bags which are cheap and disposable.

The prolonged complication of delayed perineal wound healing is probably explained by the previous perirectal and perianal inflammation.

The patients have been encouraged to join Q.T. Inc., an organization of individuals with ileostomies and colostomies who have meetings and a periodical, enabling them to share their experiences with others in the care of their ileostomy stomas.[15] One of the reported patients modified the plastic bag, and another has added a pocket to his undershorts, in which the ileostomy bag can rest, thus reducing the strain on the ring and abdomen.

Summary

(1) When operation becomes necessary in ulcerative colitis and the rectum is involved in the disease process, total coloproctectomy and ileostomy in one stage can serve as a life-saving and curative procedure.

(2) Seven cases in which this procedure was performed are presented.

References

1. Donald, J. M. and Viar, W. N.: One State Colectomy, Proctectomy and Ileostomy for Diffuse Ulcerative Colitis, South. M. J. 53:335, 1960.

2. Greenfield, J.: One-Stage Ileostomy and Total Coloproctectomy For Ulcerative Colitis, Am. Surgeon 26:649, 1960.

3. Greenfield, J.: Total Coloproctectomy and Ileostomy in One Stage for Ulcerative Colitis, Memphis & Mid-South M. J. 36:21, 1961.

4. Ravitch, M. M.: Total Colectomy and Abdominoperineal Resection (pan-colectomy) In One Stage. Ann. Surg. 144:758, October 1956.

5. Bruce, D. and Cole, W. H.: Complications of Ulcerative Colitis, Surg. Gynec. & Obst. 101:353, 1955.

6. Crohn, N. N.: Errors To Be Avoided In The Surgical Treatment of Nonspecific Ulcerative Colitis, S. Clinics North America 38:251, 1958.

7. Michener, W. M., Gage, R. P., Sauer, W. G., and Stickler, G. B.: The Prognosis of Chronic Ulcerative Colitis in Children. New England J. Med. 265:1075, 1961.

8. Peskin, G. W. and Davis, A. V. O.: Acute Fulminating Ulcerative Colitis With Colonic Distention, Surg. Gynec. & Obst. 110:269, 1960.

9. Prohaska, J. V., Dragstedt, L. R. II, and Thompson, R. G.: Ulcerative Colitis: Surgical Problems In Corticosteroid Treated Patients, Ann. Surg. 154:408, 1961.

10. Donovan, M. J. and O'Hara, E. T.: Sexual Function Following Surgery For Ulcerative Colitis, New England J. Med. 262:719, 1960.

11. Priest, F. O. and Gilchrist, R. K.: Pregnancy In The Patient With Ileostomy and Colostomy, J.A.M.A. 169:213, 1959.

12. Stahlgren, L. H. and Ferguson, L. K.: Influence On Sexual Function of Abdominoperineal Resection for Ulcerative Colitis. New England J. Med. 259:873, 1958.

13. Brooke, B. N.: Management of Ileostomy Including Its Complications, Lancet 2:102, 1952.

14. Turnbull, R. B. Jr.: Surgical Management of Ulcerative Colitis, J.A.M.A. 169:1025, 1959.

15. Linneberg, E.: Q. T. Boston-Ileostomy Group, New England J. Med. 25:1008, 1954.

16. Nickel, W. F. Jr.: Combined Operative Procedures For Ulcerative Colitis, Surg. Gynec. & Obst. 101:353, 1955.

17. Baronofsky, I. D., Lyons, A. S. and Edelman, S.: Place of Fecal Diverting Procedures in the Surgical Treatment of Ulcerative Colitis, Ann. Surg. 151:169, 1960.

18. Mayo, C. W., Fly, O. A. Jr. and Conolly, M. E.: Fate of Remaining Rectal Segment After Subtotal Colectomy for Ulcerative Colitis, Ann. Surg. 144:753, 1956.

19. Turnbull, R. B. Jr.: Symposium on Ulcerative Colitis. Management of the Ileostomy, Am. J. Surg. 86:617, 1953.

CORONARY HEART DISEASE AMONG THE NAVAJO INDIANS. Fullmer, H. S. and Roberts, R. W., Ann. Int. Med. 59:740, 1963.

Navajo Indians have a low incidence of coronary artery disease according to this study from the Navajo-Cornell Field Studies. This excellently planned and executed epidemiologic study was done over a period of six years on the most primitive Indian group in the United States. The Many Farms-Rough Rock area and population is located in the interior of the Navajo Reservation in Arizona, one hundred miles from Gallup, New Mexico. This group has maintained, in the main, their own distinctive language, religion, social organization, economy and customs to a greater degree than most minority groups. The total population is 2,300. The subjects were selected for study as they came voluntarily to the reservation clinic. An attempt was made to study completely all subjects over 30 years of age. Complete data were obtained on 413 of 508 eligible persons in the area, consisting of a medical history, physical examination, chest x-ray, electrocardiogram, hematocrit reading or hemoglobin level, urinalysis, S.T.S. and serum cholesterol.

During the 6 year study only 4 cases of coronary heart disease were discovered in the population of 508. Two in the 245 men and two in the 263 women. The 2 men were 47 and 90 years old. The women were 65 and 72 years of age. The 47 year old man and the 72 year old woman died. The incidence of death due to coronary artery disease is 4% of 508 people over the 6 year period. There were 24 deaths from all causes. The number of deaths in the Navajo male was about half of what would have been expected had the general United States mortality rates been applied. In the female, it was two thirds of what would have been expected.

In comparing the data with the Framingham Study, the incidence of coronary artery disease is significantly lower. There would have been expected 9 episodes of coronary heart disease in the Navajo men and 3 in Navajo women during the 6 year period. However, only one such episode occurred after being corrected for age.

In consideration of certain "risk-factors" such as blood pressure, serum cholesterol and electrocardiographic evidence of left ventricular hypertrophy, it was found that the incidence of hypertension is low, being 4.7% of the study population. Of 21 individuals, 13 were men and 8 were women; the serum cholesterol was significantly lower than those of the Framingham Study; presence of left ventricular hypertrophy is significantly lower than in the Framingham Study.

The study, interestingly enough, determined by history and actual observation of meals, that the diet is high in saturated fats, consisting traditionally of broiled or stewed mutton, bread, and potatoes fried in lard and coffee three times a day.

Of all the host factors, the diet seems the most interesting and much speculation can be made concerning the low incidence of coronary artery disease in a group with high dietary intake of saturated fatty acids. The authors suggest that multiple factors in addition to diet operate to determine the low incidence of coronary artery disease among the Navajo Indians. (Abstracted for the Middle Tennessee Heart Association, by John Thomas, M.D., Nashville.)

Too often this diagnosis is overlooked in the early hours of an acute abdominal episode. The author reviews the clinical findings which should raise suspicions in the mind of the attending physician.

The Differential Diagnosis Of Acute Pancreatitis*

JOSEPH J. DODDS, M.D., Chattanooga, Tenn.

The differential diagnosis of acute pancreatitis includes almost every condition occurring in the chest or abdomen. Diagnostic errors are common and it is reported that the frequency of mistaken admission diagnoses in this condition ranges from 30 to 50%. An accurate diagnosis is important since it is one of the few acute abdominal situations in which conservative treatment is generally more effective than surgical intervention. Mortality figures in patients with acute pancreatitis who are operated upon are 15 to 25% higher than in patients treated medically. Similarly, unnecessary delay when a surgically amenable lesion is present and not recognized results in increased morbidity and mortality.

Clinical Picture

In reviewing the clinical picture of acute pancreatitis one finds the incidence is highest in middle aged adults and both sexes are equally affected. The patient appears acutely ill. Pain is the most consistent feature, occurring in 90 to 95% of patients. In most its onset is sudden, often following a heavy meal or excessive use of alcohol. It usually is constant and severe and is located in the upper abdomen, particularly the epigastrium. Radiation may be in any direction, though the back is the most common site of referred pain. In some instances it is partially relieved by bending forward. Approximately 25% of patients give a past history of similar attacks. Nausea, vomiting, and constipation are other common symptoms.

Marked abdominal tenderness, predominately in the epigastrium and right upper quadrant, and associated muscular guarding are the most frequent physical findings. The extreme rigidity often seen as a result of a perforated viscus is rarely observed. Other abdominal signs which may be present are: rebound tenderness, distention, and diminished to absent peristalsis. Examination of the chest may reveal basilar rales or dullness. Fever is frequently present but is usually less than 102 degrees; chills are uncommon. Transient jaundice is reported in approximately 25% of cases. Gastrointestinal bleeding may occur in rare instances. Hypotension or a shock-like state is seen in about 10% of patients. Hypertension, on the other hand, is present in 20 to 25%. Subcutaneous ecchymoses, as Cullen's or Turner's signs, are rarely seen; if present they signify the absorption of extravased blood, usually from the pancreatic area.

The laboratory plays an important role in the diagnosis. The serum amylase is reported to be elevated in 65 to 80% of patients. In most instances of acute pancreatitis amylase values range from 2 to 5 times those of the normal; values as high as 8,500 Somoygi Units have been reported. Elman[1] states that diastase titers above 1,000 units are seldom due to any condition other than acute pancreatitis. However, failure to find an elevated serum amylase may be the result of massive necrosis of the gland. The rise in serum diastase begins within a few hours after the onset of symptoms; maximum titers are usually present within 24 to 48 hours and characteristically remain elevated for 2 to 4 days. It is generally accepted that there is no close correlation between the degree of amylasemia and the severity of the disease. Other diseases which may be associated with an elevated serum amylase include: perforated peptic ulcer, acute intestinal obstruction, acute cholecystitis with or without calculi, pri-

*From the Earl Campbell Clinic Association, Chattanooga, Tenn.

mary disease of the liver, obstructive disease of the salivary glands, carcinoma of the head of the pancreas or ampulla, and renal disease. Administration of opium or its derivatives will also produce an amylasemia which may persist for 24 or more hours. The diastase levels in these conditions, although they may be quite high, usually are less than 500 U. Approximately one hour is required to do a serum amylase determination; more rapid methods, requiring only ten minutes, are available and although not as accurate are useful as emergency procedures in the differential diagnosis of acute abdominal situations.

The serum lipase and urinary diastase, after a lag period of a few hours, will closely parallel the serum amylase. Their main advantage is that they often remain elevated several days after the serum amylase has returned to normal. Since more time is required to perform these tests, they are used mainly as supplementary procedures to confirm the diagnosis or when the patient is first seen late in the disease. The same conditions which may cause falsely elevated titers of serum amylase may likewise increase the serum lipase.

Nardi[2] recently recommended the use of serum trypsin determinations in pancreatic disease. He found significant elevations in 12 of 14 patients with proven acute pancreatitis, and in 6 of 7 patients with carcinoma of the pancreas. False positives occur in less than 15% of cases and usually are only minor increases.

In selected cases determination of amylase in the peritoneal fluid may be of value in making a correct diagnosis. Peritoneal amylase is consistently higher and remains elevated up to 3 days longer than serum amylase. It is a safe and valuable diagnostic aid, particularly if the patient is seen several days after the onset of symptoms. Other conditions which may be associated with falsely elevated values include: high intestinal fistula, such as a perforated peptic ulcer, strangulation of the small intestine, and mesenteric vascular occlusion.

Electrolyte disturbances are common in patients with acute pancreatitis. Depressions of the serum calcium and potassium occur most frequently, though low serum sodium and magnesium levels have also been reported. With the exception of the serum calcium these changes occur early in the disease and are of short duration. Hypocalcemia usually begins on the second or third day and may persist for as long as 2 weeks. Maxium depressions develop 4 to 6 days after the onset of symptoms. It is generally agreed that a definite correlation exists between the degree of hypocalcemia and the severity of the attack. Disturbances in electrolytes are believed by some to be responsible for the electrocardiographic changes which may occur in patients with acute pancreatitis.

Other laboratory abnormalities which are frequently observed include: transient hyperglycemia, diabetic type glucose tolerance tests, glycosuria, albuminuria, and leukocytosis.

Innerfield and his associates[3] have reported that the plasma antithrombin titer is a specific test for pancreatic disease, although other authors have not been able to duplicate their findings.

X-ray examination of the abdomen may show changes as early as 6 hours or as late as 4 days after the onset of symptoms. Segmental ileus is the most frequent finding reported, dilated segments being seen especially in the duodenum, upper jejunum, or the ascending or transverse colon. Other suggestive radiographic findings include, gastric distention, extrinsic displacement of the stomach and duodenum, and left sided pleural effusion. In addition the x-ray may be useful in ruling out other conditions which simulate acute pancreatitis.

Differential Diagnosis

Acute pancreatitis should be considered as a possible cause for any severe pain located within the abdomen or chest. The differential diagnosis is further complicated by its frequent association with disease of the bilary tract. The two conditions are found occurring simultaneously in 40 to 80% of reported cases of pancreatitis. The three conditions which most often simulate acute pancreatitis are: perforated peptic ulcer, acute intestinal obstruction, and acute cholecystitis. Other diseases which may cause confusion at times are acute appendicitis, mesenteric vascular occlusion, renal calculus, ruptured ectopic pregnancy, myo-

cardial infarction, dissecting aortic aneurysm, acute porphyria, and acute lupus erythematosus.

Peptic ulceration is primarily a disease of middle aged men. When perforation occurs the patient appears acutely ill and may be in shock. There is a sudden onset of severe, constant, epigastric pain which progresses to involve all or part of the abdomen. Provided the perforation does not involve the pancreas there usually is no definite reference of pain to the back. Vomiting is a late symptom. Peritonitis develops quickly with generalized abdominal tenderness particularly on the right side, muscular rigidity, and absent peristalsis. The rigidity, as a general rule, is much more marked than found in acute pancreatitis. Past history often reveals previous episodes of ulcer dyspepsia or epigastric pain relieved by food or alkali. Previous x-ray studies may have demonstrated an ulcer and present films will usually show an accumulation of air under the diaphragm. The serum amylase may be elevated, though values higher than 500 U. are rarely observed. Serum electrolytes are relatively undisturbed unless prolonged vomiting has produced a depression of the serum chloride or potassium.

Early in the course of *acute mechanical intestinal obstruction,* without strangulation, the patient does not seem acutely ill. Pain is slower in onset than occurs as a result of acute pancreatitis. It is colicky in nature, limited to the abdomen and occurs at irregular intervals. Vomiting is more frequent and copious than occurs in patients with pancreatitis. If the obstruction is low the vomitus will have a fecal odor. Progressive distention develops and later in the course of the disease one may note visible peristalsis. The abdominal musculature usually remains soft and no marked tenderness exists until late in the disease unless an inflammatory process, such as diverticulitis, is responsible for the obstruction. Peristalsis is high pitched and peristaltic rushes reach a peak at the same time the patient complains of maximum pain. One must be alert to possible causes as hernias, or the presence of an abdominal surgical scar. If strangulation exists the clinical picture is similar except the symptoms and signs are more severe. X-ray films show diffuse distention and fluid levels. Elevations of the serum amylase may occur but rarely are more than 2 to 3 times the normal. Because of profuse vomiting serum chloride and potassium levels are depressed.

Acute cholecystitis, with or without stones, is more frequently seen in older persons or in young women who have had one or more pregnancies. There is a gradual onset of nausea, anorexia, and low grade fever. Chills are much more common than with pancreatitis. The patient may give a past history of recurrent indigestion or biliousness. Physical signs are limited to mild tenderness in the right upper quadrant and some muscle guarding. Previous x-ray studies may have demonstrated a nonfunctioning gallbladder. If stones are present, characteristically the pain is severe, sudden in onset, and colicky in nature. It is located primarily in the right upper quadrant and extends through to the right scapular area. Movements of the diaphragm aggravate the pain. As opposed to acute pancreatitis, attacks frequently last only a matter of hours and often a single dose of a narcotic will give complete relief. In both conditions there often is a history of similar attacks in the past with relative freedom from symptoms between attacks. Tenderness in the right upper quadrant and muscle guarding is marked and occasionally the gallbladder is palpable and tender. Distention due to paralytic ileus is uncommon. If a stone or stones become impacted in the common duct, the symptoms and signs of obstructive jaundice will superimpose on those already present. Abdominal x-ray films may demonstrate the calculi. Elevations of the serum amylase may occur but values are usually less than those due to pancreatitis. Serum electrolytes generally are not disturbed unless secondary to prolonged vomiting.

Acute appendicitis is principally a disease of young adults. Confusion with acute pancreatitis is most likely to arise if the appendix is situated retrocecally or if the patient has a high lying cecum. The patient may appear acutely ill but prostration is uncommon. Anorexia, nausea, and vomiting are usually the initial symptoms. Al-

though early the pain may be generalized, localization to the right side occurs within a few hours, and tenderness and muscular guarding are on the right side. Frequently marked tenderness is found on rectal examinations. Serum amylase is normal unless generalized peritonitis has occurred.

Mesenteric vascular occlusion usually occurs in older persons. The onset is sudden and shock may exist. The presenting picture may be that of intestinal obstruction with pain and distention. The abdominal pain is severe and generalized, and the distention is gradually progressive. Early x-ray examination may show the dilated loop of infarcted bowel. Serum enzymes and the peritoneal fluid amylase are elevated. Examination of the peritoneal fluid reveals the presence of gram negative bacteria which will prove to be colon bacilli. (No bacteria are present in the peritoneal fluid obtained from patients with acute pancreatitis.)

The principal symptom of a *renal* or *ureteral calculus* is unilateral pain. This pain is colicky in nature, located in the back or flank and radiating to the groin. Nausea and vomiting are also present. Either gross or microscopic hematuria is usually noted. Serum enzymes are normal and plain films or urography will demonstrate the stone.

Ruptured ectopic pregnancy involves women of the child bearing age. The pain is severe but is localized lower in the abdomen than that of pancreatic origin. History reveals a period of amenorrhea followed by irregular vaginal spotting. Localized tenderness is noted on pelvic examination. Serum enzymes and electrolytes are normal.

The pain of *myocardial infarction* on occasion may simulate that due to acute pancreatitis, though pancreatic pain rarely radiates to the neck or arms. The onset of pain due to coronary occlusion is associated with dyspnea, profuse sweating, and often shock. There is frequently a history of exertional pain relieved by rest. Serum amylase and lipase are usually normal. The serum transaminase is increased in both conditions which limits the differential diagnostic value of the test, however, values are usually higher in patients with myocardial infarctions. The electrocardiographic changes occasionally seen in patients with acute pancreatitis are inconsistent and variable when compared with those secondary to coronary occlusion.

Dissecting aortic aneurysm, acute porphyria, and acute lupus erythemotosus are rare conditions which may be mistaken for acute pancreatitis. Patients with a *dissecting aneurysm* may give a prolonged history of chronic pain located in the neck, shoulder, or back. With dissection there is a sudden aggravation of this pain and rapid development of shock. The patient appears critically ill. The acute pain is often precipitated by exertion. Vomiting is uncommon. Blood pressure in the legs is reduced and femoral pulses are absent. *Acute porphyria* may cause colicky abdominal pain which may be local or generalized. Constipation is common and moderate distention is often present. On x-ray examination the distention is seen to involve the colon predominently. Muscular guarding or rigidity is absent. The diagnosis is made by demonstrating abnormal porphyrins in the urine. Marked generalized abdominal pain as a result of peritoneal serositis occasionally occurs in *acute lupus erythematosus*. Moderate abdominal distention and diffuse tenderness may likewise exist. The diagnosis is made by the finding of other manifestations of the disease, such as dermatitis, polyserositis, splenomegaly, and the laboratory demonstration of leukopenia, anemia, and L. E. cells.

Conclusion

It is often necessary to exclude other abdominal diseases before a diagnosis of acute pancreatitis can be made. However, the disease in many instances will give rise to positive manifestations which may be in themselves diagnostic. The findings in a middle aged individual who has over indulged in food or alcohol, of acute, steady, prolonged, upper abdominal pain extending through to the back, nausea, vomiting, constipation, and distention should suggest acute pancreatitis and the necessary steps to prove or disprove the diagnosis should be taken.

References

1. Elman, R.: Acute Pancreatitis: A Conjoint

Medical and Surgical Disease, J Nat Med Assn 46:386, 1954.

2. Nardi, G.: Serum Trypsin Determination in Pancreatic Disease, J Lab Clin Med 52:66, 1958.

3. Innerfield, I., Angrist, A. and Benjamin, J.: Antithrombin Titer in Acute Pancreatitis, Amer J Med 12:24, 1952.

FAMILIAL OCCURRENCE OF DERMATOMYOSITIS: Case Reports and a Family Survey—J. A. Lambie (Grand Forks, N.D.) and I. F. Duf. Am. Intern Med. 59:839 (Dec.), 1963.

The fourth instance of familial occurrence of dermatomyositis is reported. A clinical diagnosis of dermatomyositis was made in two female first cousins, 13 and 17 years of age. The relatives of the two propositae were studied for clinical evidences of connective tissue disease and serum protein abnormalities. Blood specimens were obtained from 38 blood relatives, 8 non-blood relative controls and the 2 propositae. Forty-four relatives were examined for connective tissue disease. Three relatives and one proposita had definite, and three relatives had borderline elevation of serum gamma globulin. Two relatives had weekly reactive latex slide tests for the rheumatoid factor. Two relatives and one proposita showed a trace of cryoglobulins. One relative had a positive antinuclear factor test. Six relatives and one proposita had equivocally positive antinuclear factor tests. Five immediate relatives and one non-blood relative had either atypical lupus erythematosus (LE) cells or extra cellular material (ECM) on LE preparations. The mother of one patient had definite rheumatoid arthitis, and two other relatives had changes suggesting possible rheumatoid arthitis. The findings observed were the familial occurrence of dermatomyositis; the presence of other rheumatic disease in immediate relatives differing from that of the two propositi; and asymptomatic relatives with serum protein abnormalities. These findings may reflect a relationship between rheumatoid arthritis, dermatomyositis and certain serum protein abnormalities.

CASE REPORT

Aborting Submucous Myoma In a Cervical Stump*

Samuel S. Binder, M.D., Chattanooga, Tenn.

A perusal of the gynecologic literature for the past 20 years shows a lessening of controversy over total versus subtotal hysterectomy. To most of us today, the word "hysterectomy" alone usually means total removal of uterus; the total abdominal hysterectomy is the standard operation.

In a review of the subject in 1946, Masson[1] of the Mayo Clinic, referred to the total operation as "the radical operation." He stated, "many men who have had extensive experience, do consider the subtotal procedure the operation of choice in most cases in which surgical treatment is used for benign conditions in the uterus." The arguments in favor of the subtotal operation were that carcinoma of the cervical stump was so rare it seemed unnecessary to remove the cervix. Masson pointed out that many of the patients seen with benign conditions of the cervical stump were sufficiently concerned that it brought them to the clinic.

As a matter of curiosity, the interns and first year residents on the gynecologic service at our hospital were asked why they thought total hysterectomy was better than the subtotal operation. The universal reply was, "It prevented the development of carcinoma of the cervical stump."

As will be pointed out later, most cervical stumps are removed for benign conditions. This apparently was true in 1946 when Masson wrote his review and seems to be true at the present, according to the more recent reports which will be discussed later.

The following case is reported because it represents an unusual complication following subtotal hysterectomy. In addititon, it illustrates a danger facing all patients having surgery:

Case Report

The patient, a 45 year old negress, was admitted to the Baroness Erlanger Hospital on Feb. 6, 1963, complaining of vaginal bleeding and cramping abdominal pains of 1 month's duration. The medical history indicated that she was a mild diabetic controlled previously with a "pill" and diet. There was no history of heart disease.

Past Surgical History. She had a tubal ligation 17 years previously, followed by intestinal obstruction 4 years later. In 1960, a subtotal hysterectomy was done for myoma. This operation was done by a doctor not having had surgical or gynecologic training, in a small, nonapproved hospital.*

Physical Examination. BP. was 120/80 and P. 76. The patient was a well developed and well nourished woman bleeding profusely from the vagina. Otherwise the physical findings were considered normal.

Pelvic Examination. A moderate amount of bright red blood was trickling from the vagina. A small rectocele was noted on straining. On bimanual examination a spherical firm mass was felt protruding through a surrounding soft collar of tissue. This felt similar to an effaced cervix containing a vertex presentation during a 2nd trimester abortion. The speculum examination showed a dilated cervix through which protruded a 5 cm. fibrous tumor. The edge of the cervix surrounding the tumor was bleeding. A diagnosis of aborting submucous myoma in a cervical stump was suggested by these findings. (Fig. 1.)

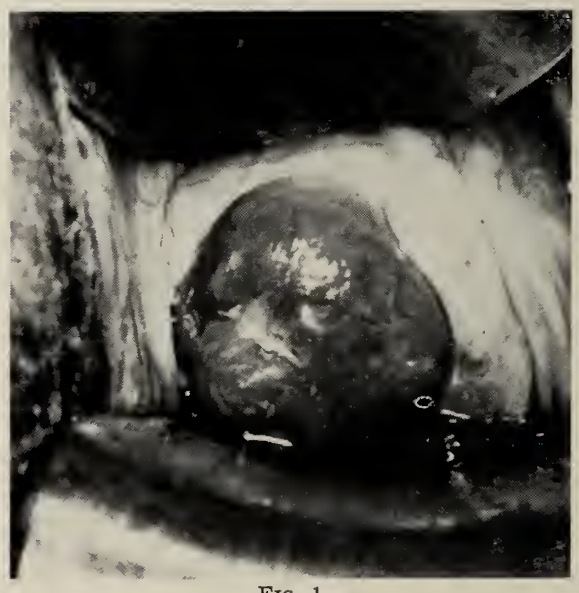


FIG. 1

Course. Because bleeding was excessive, it was thought an attempt should be made to control it. The patient was taken to the operating room for myomectomy, cervical biopsy and cauterization or suturing of bleeding areas. It was thought best

*From the Obstetric-Gynecologic Service, Baroness Hospital, Chattanooga, Tenn.

*This fact is mentioned to imply a possible lack of knowledge of the technic of total abdominal hysterectomy.

to eliminate the possibility of cervical carcinoma before proceeding with cervicectomy.

Anesthesia was induced with sodium pentothal,** and the patient was carried with nitrous oxide and oxygen and halothane (Fluothane). The cervix was exposed and traction was placed on the myoma. It had a broad base attached to the left side of the cervix. As the myoma was displaced downward, a small tear in the peritoneum was noted. Palpation around the cervix did not reveal any induration or infiltration. Because the peritoneal cavity had been entered, it was felt best to proceed with cervicectomy. The portio vaginalis was incised and the vaginal tissues were dissected from the cervix anteriorly and posteriorly. The left parametrial tissues were clamped, cut and suture ligated with #1 chromic catgut. As we proceeded to the right side the anesthetist announced that the blood pressure and pulse were not detectible. While the anesthetist administered oxygen, three sharp blows were administered to the anterior chest wall without response and external cardiac massage was started.

The cardiac arrest emergency equipment was obtained, and fortunately the cardiac surgical team including thoracic surgeon, cardiologist and technician were in the vicinity of the surgical suite. The cardioscope revealed ventricular fibrillation. Calcium chloride was given I.V. and intracardiac, followed by defibrillation with electric shock. The cardiac rhythm immediately reverted to a more normal pattern with sinus tachycardia.

With oxygen alone the cervicectomy was completed. The vaginal vault was left open with a continuous lock stitch around the free margin, using #1 chromic catgut, for hemostasis. Because of the persistent tachycardia lanatosidec (Cedlanid) was given. The patient was observed for 3 days in the intensive care unit of the hospital. Urinary output was good and the cardiac rhythm remained normal. The only complaint was pain in the left side of the chest. A fracture of the left 2nd rib was disclosed by chest x-ray.

We were able to obtain additional information on the patient's previous operation. Fortunately, the pathology specimen has been submitted to our hospital for study.

The report on the subtotal hysterectomy specimen was multiple myomas. Two months after subtotal hysterectomy a cervical biopsy was done. This report revealed "multiple segments of the hemorrhagic polypoid friable tissue," which on section were consistent with small cervical leiomyoma and acute and chronic cervicitis.

Her condition remains well. There was no evidence of cerebral or cardiac changes during convalescence. Her diabetes remained under good control. She was discharged on the 14th postoperative day. Follow-up visits revealed normal healing of the vaginal vault and she continued to feel well.

**Ayerst

Discussion

Modern gynecology has emphasized the importance of doing a total abdominal hysterectomy and it is no longer acceptable to approach a patient surgically with the intent of doing a subtotal hysterectomy. Occasionally, because of technical difficulties or problems in anesthesia a subtotal hysterectomy will be necessary.

Although much emphasis has been placed on carcinoma of the cervix developing in the cervical stump after the subtotal operation, we must realize that most cervical stumps are removed for benign conditions.

Several interesting studies have been made on this subject which illustrates the above points.

Dunn[2] studied the prevalence of carcinoma arising in cervical stumps comparing it with a control group of women with intact uteri. He concluded "That a woman with a cervical stump has the same chance, no more or less, of developing carcinoma of the cervix, as a woman with an intact uterus, all other factors being equal."

In a series of 397 cases from the Mayo Clinic, Welch and Associates[3] described bleeding and prolapse of the stump, with or without vaginal relaxation, as the most frequent indication for removal of the cervical stump. In their series, carcinoma in situ was found in 5% and invasive carcinoma of the cervix 1.3 per cent. The other indications being related to benign disease.

Riva and his group[4] studies 212 cases of cervical stumps removed at the Walter Reed Hospital and Georgetown University Hospital over an approximate 7 year period for benign diseases. During the same interval they say that "over 50 cases of malignant disease of a cervical stump have been treated."

Their study emphasizes that the majority of their patients had surgery for benign disease. The number of malignant cases during the same time interval is not representative of the incidence of carcinoma of the cervical stump because many cases are referred to Walter Reed Hospital from other branches of the military service for definitive treatment of cancer.

Planas[5] reviewed all the cervicectomies

from the Pennsylvania Hospital, Philadelphia, over a 10 year period. Although there were only 35 cases, the majority were for benign disease. It is interesting that he had one degenerated, pedunculated cervical myoma in his series.

The emphasis is being placed on benign disease because so much stress has been laid on cervical stump malignancy. Since the majority of cervical stumps are being removed for nonmalignant indications, it should serve notice that a subtotal hysterectomy is an incomplete operation which may invite the need for additional surgery in the future. It cannot be stressed sufficiently that those doing surgery should never approach a surgical procedure with the intent of doing an incomplete operation.

Cardiac arrest may occur during any operative procedure requiring general anesthesia. It remains a potential hazard for all types of cases, minor or major. The prompt recognition and knowledge of management should be known to all surgeons. We should familiarize ourselves with the technic of external cardiac massage, for this may be the key to a more successful management to this problem.

Summary

1. An unusual case of aborting submucous myoma in a residual cervical stump is reported, associated with cardiac arrest during cervicectomy and successfully managed with external cardiac massage and defibrillation.

2. It has been shown that benign disease explains the need for most cervicectomies.

3. In the present time, a subtotal hysterectomy must be recognized as an incomplete operation which may require another operative procedure in the future.

References

1. Masson, James C.: Total versus Subtotal Hysterectomy, Progress in Gynecology, New York Grune & Stratton, 1st Ed., 1946.

2. Dunn, Marvin R.: Prevalence of Carcinoma Arising in Cervical Stumps, Am. J. Obst. & Gynec. 82:83, 1961.

3. Welch, John S., Counsellor, Virgil S. and Malkasian, George D.: The Vaginal Removal of the Cervical Stump, S. Clin. North America 39:1073, 1959.

4. Riva, H. L., Hefner, James D., Marchetti, Andrew A., and Padovano, Louis A.: Prophylactic Trachelectomy of Cervical Stump, South. M. J. 54:1082, 1961.

5. Planus, Mercedes V.: Cervicectomy Following Supra-Vaginal Hysterectomy, Am. J. Obst. & Gynec. 79:480, 1960.

GENITOURINARY COMPLICATIONS OF BLUNT PELVIC TRAUMA—I. A. D. Todd (65 Cobden St., Willowdale, Ont.) Canad J. Surg. 7:43 (Jan.), 1964.

The incidence of rupture of bladder or urethra associated with pelvic fracture was found to be 4.6% in 260 patients, although hematuria occurred in 10.8%. A high mortality rate (10.4%) was found and felt to be due to injury to organs other than those of the genitourinary tract. A separate series of 46 patients who had rupture of the bladder or urethra was studied. Intraperitoneal bladder rupture occurred as frequently with as without a pelvic fracture while bulbar urethral rupture was not associated with fracture of the pelvis. Extraperitoneal rupture of the bladder and rupture of the membraneous urethra were usually associated with pelvic fracture. Prolonged morbidity from stricture and impotence was found in patients with rupture of the membraneous urethra, particularly in those with bilateral pubic rami fractures. The reason for this was analyzed and a suggestion made that cooperation between urologists and orthopedic surgeons in the treatment might lead to a more favorable prognosis.

rom the
xecutive
irector

MEDICAL DIGEST

News of Interest to Doctors in Tennessee

Statement of the TMA Council Concerning Relations Between Physicians and Hospitals

● "The Council has considered on many occasions and at great length the problems related to contractural relationships between physicians and hospitals, and has obtained the advice of physicians and hospital administrators concerned in these arrangements. After weighing all the information, the Council has reached the conclusion that any method of compensation based on a salary, or on a percentage of fees collected by the hospital is unsatisfactory and will ultimately lead to unethical practice—either fee splitting by the physician, or corporate practice of medicine by the hospital.

"Any percentage arrangement will depend upon the bargaining ability of the parties involved, and both the physician and the hospital administrator will be subject to economic or political pressures unrelated to the professional care of patients. All this can be obviated by the simple arrangement that patients make with other physicians, namely; That the physician render his professional service and submit a charge for this on a 'fee for service' basis.

"Accordingly, the Council unanimously adopted the motion that a percentage or salary basis as a means of compensation for practicing physicians can only lead to unethical practices, and that as soon as feasible physicians having such arrangements with hospitals shall assume a fee for service basis, submitting bills to patients entirely separate from hospital bills."

Actions of the Board Of Trustees, January 11-12

● Committee appointments for 1964, appointment of a Nominating Committee, appointments to the IMPACT Board of Directors, nominees for the State Board of Nursing, incorporation of the Tennessee Medical Association, proposed amendment to the By-laws, recommendations from the Legislative Committee, a study of the activities of the Health Careers Committee of the Tennessee Hospital Association, reports to the House of Delegates, facilities for furthering training of doctors and the status of the drug formulary under the MAA program, were among important matters discussed by the Board of Trustees at its quarterly meeting. Another important subject presented was the growing number of physicians, reported by the Welfare Department, who are in violation of the State adoption laws.

Committee Appointments

● On January 11, the Board made appointments to all standing and special committees for 1964, and a Nominating Committee. The Board of Directors for IMPACT was also appointed, and names of physicians submitted to the Governor for appointment to the State Board of Nursing.

Recommend TMA to Be Incorporated

● TMA's attorney presented in depth the advantages and disadvantages of incorporation of the Association. The Board took action and directed the attorney to proceed toward the incorporation of the Tennessee Medical Association with approval of the House of Delegates which will be acted upon by the House in April.

——Heard a report submitted by the Chairman of the Advisory

Committee to the Department of Public Welfare to be presented to the House of Delegates.

Action on Legislative Matters

● The Legislative Council of Tennessee is studying the licensing of blood banks and laboratories, and our Association has been asked to submit an official statement on its position. An ad hoc committee to study the problem has been directed to present a recommendation to be included in a resolution to the House of Delegates in April. In addition, further studies by the Legislative Council are being made concerning laws relating to mentally ill persons, and a study of programs under the Department of Public Welfare. The Board directed steps to be followed in these studies.

TMA to Intervene in Lawsuit

● A request for TMA to intervene in a lawsuit arising from the amendment to the Optical Dispensing Act, passed by the General Assembly in 1963, resulted in the Board approving intervention. Requests from the dispensing opticians and ophthalmologists are being supported on this issue. The Board approved a resolution that TMA intervene in the suit and that the recommendations of the Legislative Committee and legal counsel be accepted.

Other Actions

● Approved a report on the success of the state-wide Congress on Mental Illness and Health conducted in Nashville on November 13-14 by the Committee on Mental Health——Heard a report relative to the state-wide Sabin Oral Vaccine program. It was reported that only twelve counties out of the 95 in Tennessee had not indicated whether or not they would conduct an immunization program. Forty-two counties had completed the three-dose program. Forty-one counties are in the process, most in the third-dose of the series.——Heard a report from Dr. Hawkes and recommendations submitted to participate in the Health Careers Program as sponsored by the Tennessee Hospital Association. Action taken recommended that the Executive Committee of the Board meet with the similar committee of the Hospital Association in order to determine participation by TMA——Discussed a letter from the American Medical Association dealing with increasing facilities for the further training of doctors——Accepted a report from the President on the activities of the Tennessee delegation at the recent clinical meeting of the American Medical Association in Portland, Oregon——Accepted a report from the members of the Advisory Committee to the Governor dealing with the drug formulary under the MAA program.

Approved Mailing Of Brochure

● At the request of the Tennessee Department of Public Welfare, a letter from the Commissioner, together with a descriptive brochure, has been mailed to physicians outlining what persons who seek help through the MAA program should take as proof to the County Welfare Offices to prove their eligibility.

Adoption Law Violations

● Of some concern is a report from the Department of Public Welfare of some physicans who are violating the adoption laws. TMA has been asked to assist in correcting this problem and the matter has been referred to the Council for action.

——Heard a report from Dr. Hawkes, a member of the Liaison Committee to the Public Health Council, relative to two resolutions to be presented at the House of Delegates in April. One deals with the tuberculosis program of the Public Health Department and the second with a matter concerned with the crippled children's service.

Public Service

THE TENNESSEE TEN

Hadley Williams, Public Service Director

President Renews Fight for King-Anderson Bill

● President Johnson has vigorously stated his intentions of getting the King-Anderson Bill into law during 1964. During his State-of-the-Union message to Congress, the President mentioned health care for the aged five times. Just one week later, President Johnson met with a group of 47 long-time proponents of federal health care legislation and re-emphasized his intentions.

Johnson told the group that "this powerful nation should not ask old people to trade their dignity and self-respect for hospital and medical care."

He said the Social Security health plan is "The American Way" and added "it is practical, sensible, fair and just."

In answering opponents arguments on Medicare, President Johnson pointed out that the patient can choose his own doctor and his own hospital under the program. The plan could be supported by the average worker and his employer, each chipping in only 25¢ a week during the entire career of the worker to care for future hospital and medical needs.

"We've just begun the fight," Johnson said. "We think this program is just, necessary, makes sense and is going to be the law of the land." He added, this is the "prudent American way" whereby elderly citizens "can retain their dignity and solvency." He added to this by saying there is nothing "we want to protect more than the dignity of these people providing for themselves."

President Johnson praised the co-authors of the Bill, Rep. Cecil R. King (D.-California) and Sen. Clinton P. Anderson (D.-New Mexico) for leading the fight "to bring better life to more people."

Hearings Concluded

● Hearings by the House Ways and Means Committee on King-Anderson have been concluded with over 70 witnesses heard during the five-day session.

Among those testifying in support of the legislation were George Meany, President of AFL-CIO, who emphasized that King-Anderson was "close to the heart" of President Kennedy and President Johnson.

Representative J. D. Dingell (D.-Michigan) also supported King-Anderson and attacked the Kerr-Mills program as "un-American" because of the "indignities" of the means test and said that old people are "dying like flies" waiting for the states to implement Kerr-Mills.

Strong opposition to King-Anderson was given by Mrs. Haven Smith, Chairman of the Woman's Committee of the American Farm Bureau Federation, who said that the trend of proposed medicare legislation is toward conformity and control.

Several governors spoke in support of King-Anderson. They were: Governor Peabody, Mass., Governor Barror, West Va., Governor Anderson, Minn., Governor Reynolds, Wisc., and New York Mayor Wagner. Dr. Kenneth W. Clement, president of the National Medical Association, also testified in favor of the Bill.

Those testifying in opposition to the legislation included: Karl Schlotterbeck of the U.S. Chamber of Commerce; the California Hospital Association; U.S. Junior Chamber of Commerce; and several state medical society presidents.

Materials Available From TMA Office

● Copies of the American Medical Association's testimony in opposition to King-Anderson before the House Ways and Means Committee are available in book form from the Public Service Office of TMA. The paper-back book is entitled "The Case Against the King-Anderson Bill (H.R. 3920)" and contains excellent up-to-date statistics and valid arguments in opposition to the Bill. Physicians of Tennessee should read this statement and keep it on file for future reference in answering questions regarding the proposal.

The film, "The Gift of Health" has been shown in several parts of our state and has been well received at each presentation. Especially effective for non-medical audiences, the film explains the implications of Social Security financed medical care and gives an excellent report of the progress of Kerr-Mills during the first three years of its existence. Use of the film at civic club meetings would provide local medical societies the opportunity to bring in Operation Hometown and enlist allies in the fight.

Unlimited quantities of pamphlets dealing with King-Anderson, socialized medicine, the Welfare state, etc., are also available from TMA. Reprints of excellent magazine articles on theses subjects are available for use in physicians waiting rooms. A personal message entitled "To All My Patients," with space for a signature or stamp, is an excellent way to approach patients and is designed for easy enclosure with monthly statements.

A note or telephone call to your Public Service Director is all that is necessary to obtain materials that will aid in conducting the fight to keep the medical profession free of government control.

Tennessee Physicians To Visit Washington

● A delegation of 21 physicians will represent TMA at a meeting with members of the Tennessee congressional delegation in Washington, D. C., March 5, 1964.

An annual affair, the Washington trip has been highly successful in the past in establishing a warmer relationship with our elected officials. The highlight of the one-day visit will be a luncheon in the House Speakers Dining Room with the Tennessee members of Congress.

Representing TMA will be Doctors H. L. Monroe, John H. Burkhart, Richard C. Sexton, Perry J. Williamson, W. Powell Hutcherson, C. Robert Clark, James K. Kaufman, D. Gordon Petty, Morse Kochtitsky, James M. Hudgins, B. F. Byrd, Jr., W. O. Vaughan, K. M. Kressenberg, Charles A. Trahern, Oscar McCallum, J. Kelly Avery, Alvin J. Ingram and Billy G. Mitchell. Others include President Bland W. Cannon; Chairman of the Board of Trustees Robert M. Finks; and Legislative Committee Chairman Tom E. Nesbitt. Mr. J. E. Ballentine and Mr. Hadley Williams of the TMA staff will also attend.

Health Vs. Luxury

● According to the U.S. Department of Commerce, Americans spent $9 billion more last year on three luxury items than on hospitals, doctors and drugs.

A total of $15.7 billion was spent for health while liquor, tobacco, and cosmetics accounted for $24.7 billion. A breakdown shows $6.2 billions spent for hospital care, $5.3 for doctors and $4.2 for drugs. Liquor claimed $10.7 billions, tobacco $7.8 and cosmetics $6.2.

Quotable Quotes

● SAMUEL GOMPERS, Founder of the American Federation of Labor, "Doing for people what they can and ought to do for themselves is a dangerous experiment. In the last analysis, the welfare of the workers depends upon their own initiative. Whatever is done under the guise of philanthropy or social morality which in any way lessens initiative is the greatest crime that can be committed against the toilers. Let social busy-bodies and professional 'public morals experts' in their fads reflect upon the perils they rashly invite under this pretense of social welfare."

STAFF CONFERENCE

Vanderbilt University Hospital*

Cervical Spondylosis

DR. DAVID E. ROGERS: This morning we have for consideration the problem of a man with cervical spondylosis. The patient will be presented by Dr. Ferguson.

DR. J. L. FERGUSON: This 58 year old man was admitted to Vanderbilt University Hospital on Aug. 22, 1962. His chief complaint was "tingling" and "loss of flesh" in his left hand. The patient, a reliable historian, dated his present illness to approximately 2 months before admission, when he noted the onset of tingling in his left little finger. This sensation had been constant since then, with some gradual increase in intensity during the subsequent 2 months, associated with occasional sensations of burning dysesthesias in the same region. The abnormal sensations did not extend to the left forearm or arm. The patient noted no actual pain. Approximately 5 weeks before admission he began to have some difficulty holding small objects in the left hand; this symptom has progressed to decided weakness and slowness of movement in the left hand. The patient first noted wasting of the flesh in the left hand about 3 weeks before admission; this wasting progressed rapidly during the subsequent period. The patient has felt some quivering of the muscles on the medial aspect of the left arm, but no similar sensations elsewhere.

Approximately a week before admission the patient had very severe nuchal and occipital pain, aching in character, lasting several days, and not relieved by mild analgesics. This disappeared subsequently and has not recurred. The patient denied any residual pain at the time of admission.

Past History. The patient's past history is generally unrevealing. He is a farmer and has on several occasions had trauma to his head and neck, but none was severe enough to require medical treatment or hospitalization. As a young man of 19 or 20 years, he had an episode of severe low back pain with radiation into the right leg after lifting a heavy object. This was diagnosed as a herniated lumbar nucleus pulposus. Some wasting of the right leg and a very slight limp resulted, but there has been no change in this for well over 30 years. Otherwise the patient states that he has always had extremely good health and has had no medical problems whatsoever.

Family History. There is no family history of any neuromuscular disorder. The patient is a hard working farmer who smokes about one pack of cigarettes a day and drinks no alcohol.

Physical Examination. General physical examination was entirely within normal limits, and significant findings were limited to the neurologic examination. The patient's gait showed a slight limp, with favoring of the right leg, which the patient stated had been present for many years without change. Examination of the cranial functions revealed no abnormalities. There was some questionable limitation to flexion of the neck. Lateral movements of the neck to the right produced some tightness of the left side of the neck extending into the left shoulder which was not, however, severe.

The upper extremities demonstrated rather striking atrophy of the muscles of the left hand, including those of the thenar and hypothenar eminences and the interossei. There was some slight wasting of the thenar and hypothenar eminences on the right side as well. Occasional muscle jerks were observed in the deltoid and biceps muscles on the left, but fasciculations could not regularly be seen. Resistance to passive stretch was within normal limits bilaterally. There were no limitations to passive movement.

There was some slowness in the fine movements and in rapid rhythmic movements in the left hand. Definite weakness in adduction, abduction, and opposition of the left thumb was demonstrated. There was also weakness in adduction and abduction of the fingers of the left hand. The grip on the left was decidedly weaker than on the right. Pinprick was less clearly perceived over the third and fourth fingers and over the ulnar borders of both hands; this was considerably more striking on the left. This hypesthesia did not extend to the forearm. On the left, there was also diminished ability to distinguish two points from one point over the tips of the third and fourth fingers. No other sensory abnormalities were demonstrable. Biceps, supinator, and pronator reflexes were equal bilaterally. The left triceps reflex could not be obtained while the right was 2+. A Hoffman Sign was present on the left but was not obtained on the right.

Examination of the trunk revealed no abnormalities. Superficial abdominal reflexes were active and equal bilaterally. In the lower extremities, there was definite atrophy of the quadriceps group on the right, along with weakness in the right anterior tibialis muscle. The knee jerks were equal on the two sides, but no ankle jerk could be obtained on the right while a good ankle jerk was present on the left. No sensory abnormalities or pathologic reflexes were obtained in the lower extremities.

This patient's admission diagnosis was cervical spondylosis.

Laboratory Studies. Admission blood and urine studies were within normal limits. X-rays of the skull were interpreted as normal. Radiologic examination of the cervical spine showed straight-

*From the Division of Neurology, Department of Medicine, Vanderbilt University School of Medicine.



FIG. 1. Lateral view of the cervical spine demonstrating loss of the normal lordotic curve, narrowing of the lower intervertebral spaces, and anterior and posterior spurring.



FIG. 2. Oblique view showing encroachment upon the lower intervertebral foramina by bony spurs.



FIG. 3. Cervical myelogram showing defect at C6-C7 interspace.

ening of the spine with narrowing of the intervertebral spaces between C4 and C5, C5 and C6, and C6 and C7. This was particularly marked at the lower two interspaces. Prominent bony spurs posteriorly were observed at the C5-C6 and C6-C7 interspaces. (Fig. 1.) Some spurring of the anterior portion of the vertebral bodies at C4-C5 and C5-C6 was also seen. Oblique views of the cervical spine showed encroachment upon the intervertebral foramina at the 4th, 5th, and 6th cervical levels, most marked at the C6-C7 level. (Fig. 2.)

Minimal degenerative changes were present in the thoracic spine. in the lumbosacral area, the L5-S1 intervertebral space appeared rather narrow but no other significant abnormalities were noted.

A lumbar puncture was done with investigation of spinal fluid manometrics. Compression of the jugular veins for 10 seconds produced a prompt rise in cerebrospinal fluid pressure to three times the resting pressure with the neck held in either the flexed or intermediate position. When the neck was extended, however, compression of the jugular veins caused no change in spinal fluid pressure. Spinal fluid was clear and colorless; and without an increase in cells or protein. Cervical myelogram revealed an abrupt defect at the joint space between C6 and C7. (Fig. 3.) Other spondylotic defects were noted above this level, but the defect at the C6-C7 level was most severe. This was thought to be related to the extensive bony spurs seen on the routine radiologic examination.

Course in Hospital. On Aug. 29, 1962, Dr. Joe M. Capps did a decompression laminectomy of the C6 and part of the C7 vertebrae. Marked compression of the nerve roots was found, due to the bony ridges and to osteophyte formation which compressed the roots themselves. The bony ridge and the osteophytes responsible for the compression were carefully removed. Postoperatively, the patient had a very benign course with no evidence of increased sensory or motor dysfunction immediately postoperatively.

DR. ROGERS: Dr. Wells will discuss the problems presented by this patient.

DR. CHARLES E. WELLS: This patient presents an important and fascinating problem in diagnosis and therapy. The problem is important for, as a farmer, this man's livelihood depends upon his continued strength and agility. It is fascinating for we are presented with a precise history of dysfunction which is recent in onset and we can demonstrate clearcut abnormalities on the neurologic examination.

Our first task clinically is to attempt an anatomic localization of the abnormality. A quick glance at this patient suggests that he is suffering from a lesion of the left ulnar nerve, resulting in atrophy of the muscles of the thenar and hypothenar eminences and the interossei of the left hand. A detailed investigation, however, shows this concept to be untenable. The weakness, and to a lesser extent the wasting, in the left hand involves not only the muscles supplied by the ulnar nerve, but muscles supplied by the median and radial nerves as well. Thus, a single lesion involving the left ulnar nerve could not be responsible for the dysfunction. In addition, there is some very slight evidence of wasting and sensory loss in the right hand also, making this diagnosis even more unlikely.

What we are facing then is a situation in which there is weakness and wasting of the intrinsic muscles of the hand bilaterally (though much more strikingly on the left). These muscles are not supplied by a single peripheral nerve but are supplied by the motor fibers of cervical roots 6, 7 and 8 and perhaps by thoracic root 1. There is, furthermore, a suggestion of weakness in the rhomboids on the left, which would raise the level of the lesion to the C5 level. There is some diminution in sensory perception bilaterally over the area supplied by the C8 sensory root. In addition, there is an absent triceps reflex on the left, suggesting localized disease at the C6-7 root level or within the spinal cord at that region. All of these clinical abnormalities thus could be explained by a disease process involving the lower cervical roots. The most likely site for them to be injured is at their foramina of exit from the spinal canal. The Hoffman reflex which is present on the left suggests however that there may also be some abnormality in function of the long tracts, i.e. the corticospinal pathways. This implies that in addition to cervical root disease, there is likely to be some involvement of the spinal cord itself as well. The abnormalities found on examination of the right leg are doubtless attributable to old disease and are probably not related to the present process.

We are thus able on a clinical basis to localize the disease process to the lower cervical root zones, with a strong probability that the cord itself is also involved in the disease process. What possible etiologic agents must be considered when such a problem is encountered clinically? Several pathologic conditions were of course considered as possible causes for this patient's clinical picture, though fortunately the clarity of his history and neurologic findings enabled us to reach a definite diagnosis rather easily. When he was first observed in the clinic, it was feared he might be suffering from amyotrophic lateral sclerosis. This subacute degenerative disease involving both the upper and lower motor neurons is of course known to occur predominantly in men during middle life and to produce striking wasting and weakness. The history of localized paresthesias as the initial complaint plus the finding of definite sensory abnormalities effectively ruled out this diagnosis.

A second possibility considered was syringomyelia. This is a chronic degenerative disease in which neurologic signs and symptoms appear secondary to damage that occurs within the spinal cord from formation of single or multiple cavities. These cavities, or syrinxes, often occur in the bulbar, cervical, and lumbar areas. This degenerative process usually makes its appearance at an age earlier than that of this patient, but his age does not definitely rule out the diagnosis. The absence of long tract signs below the cervical region and the fact that most of the findings could best be explained as secondary to lesions of the roots per se rather than the spinal cord itself were against such a diagnosis. Furthermore, the hallmark in the diagnosis of syringomyelia is a dissociated sensory loss, i.e. a sensory deficit in which appreciation of pin prick and temperature sensation is lost while appreciation of other modalities is unchanged. This appears when the syrinx interupts the crossing fibers which carry pain and temperature sensations, leaving other sensory fibers undamaged. In this patient, not only was appreciation of pin prick diminished over the ulnar borders of both hands, but there were changes in 2 point discrimination as well, thus showing that the sensory loss was not limited to pain and temperature sensations. Thus a

diagnosis of syringomyelia was rather easily eliminated.

The possibility of a tumor within the spinal canal at the cervical region had to be seriously considered. The lack of either severe or prolonged pain, plus the absence of long tract signs below the cervical cord, were all against such a diagnosis but did not entirely rule it out. The findings were, however, typical for cervical spondylosis, or cervical osteorathritis with spinal cord and nerve root compression. The history of neck pain, the slight limitation in motion of the neck, the fact that most of the clinical abnormalities could be best explained by involvement of the nerve roots rather than by disease of the spinal cord itself, all suggested that cervical spondylosis was the correct diagnosis. One could not, however, state with any certainty purely on the basis of clinical examination that the diagnosis was cervical spondylosis rather than some neoplasm within the cervical canal. To help make the diagnosis more definite, several laboratory procedures were employed.

The first of these was the roentgenologic examination of the cervical spine which demonstrated narrowing of the intervertebral spaces, spur formation posteriorly and anteriorly at the lower intervertebral spaces, and osteophyte formation impinging upon the foramina of exit of the lower cervical roots. These definitely demonstrated cervical osteoarthritis and suggested that this was the cause of this patient's difficulty.

Several other diagnostic studies aided in establishing a diagnosis. Examination of the spinal fluid revealed normal spinal fluid protein which would have been unusual in the presence of cervical neoplasm. Furthermore, manometric examination, in which the change in spinal fluid pressure is followed during ten seconds compression of the jugular veins, showed findings typical of cervical osteoarthritis. During this examination, compression of the jugular veins while the neck was held in the flexed or intermediate position resulted in striking and rapid rise in spinal fluid pressure, with rapid return to resting levels when the jugular pressure was released. When the neck was extended, however, compression of the jugular veins caused no rise whatsoever in spinal fluid pressure. Such an abnormal manometric pattern was first described by Kaplan and Kennedy a number of years ago and is characteristic for cervical spondylosis. In addition, a myelogram was performed which showed clear evidence of severe disease of the intervertebral spaces in the lower cervical regions without any suggestion of neoplasm.

The clinical picture thus was characteristic for cervical spondylosis, involving the roots of the lower cervical spine. There was nothing either clinically or one laboratory examination to lead one toward a diagnosis of cervical neoplasm.

Cervical osteoarthritis is probably a normal accompaniment to aging. It has been recognized roentgenographically for many years and can be seen in approximately 75% of people aged 50 years and over and in 90% or more of those over 70 years of age. In only a small percentage of these individuals is it a cause of clinical disease.

The change is basically a degenerative one, although trauma may play a very variable role in its development. Degenerative changes in the intervertebral discs probably begin by the third decade of life, and subsequently there is a gradual shrinkage in the thickness of the disc and a diminution in its water content. As the nucleus shrinks in size, the annulus fibrosus begins to bulge, and osteophytic processes develop at the point of attachment of the annulus to the bone. These osteophytic spurs form bony ridges which are the characteristic feature of spondylosis. These bony ridges may press against the cord or against the roots. The roots most commonly involved are at the C5-6 and C6-7 levels, which are the articulations at which the greatest movement takes place.

When such spondylodic changes result in clinical dysfunction, two syndromes of clinical significance may be seen. In one, the symptoms and signs are primarily those of root compression. Pain in the neck and shoulder region, radiating down the arms, is usually a presenting and striking complaint. As compression progresses, there may be signs of wasting and weakness in the muscles supplied by these cervical roots. The mechanism of pain production has been fairly well worked out in operations carried

out under local anesthesia. In such operations it has been found that mechanical stimulation of a compressed ventral root reproduces the pain. This pain may be completely abolished by procaine block of the related sensory root, the motor root being left intact. Thus it is likely that pain arises from persistent muscular spasm resulting from anterior root irritation rather than through any direct stimulation of the sensory roots.

The second clinical syndrome which may appear from cervical spondylosis is that of cervical myelopathy secondary to spinal cord compression. The symptoms and signs of cervical myelopathy due to cervical spondylosis are no different from that produced by any other pathogenic mechanism. Thus it may mimic multiple sclerosis, subacute combined degeneration, syringomyelia, and tumors.

A combination of these two syndromes is often seen clinically. In our patient, while clinically the disorder primarily affected the cervical roots, the Hoffmann sign in the left upper extremity nevertheless suggested spinal cord involvement as well.

Treatment in cervical spondylosis is not a predetermined matter, and each patient's therapy must be decided on the basis of his particular clinical dysfunction. Many patients having subclinical cervical osteoarthritis are in need of no treatment; the isolated radiographic detection of cervical osteoarthritis is certainly no indication that treatment is needed.

In two groups of patients, a decision as to therapy is fairly simple. In the patient who presents predominantly with symptoms of root disease as manifested by pain, perhaps along with slight sensory and motor changes, conservative treatment is indicated. By this I mean rest, avoidance of further trauma, cervical traction either with the individual in bed or sitting, and perhaps use of a supporting collar. In such instances, results from conservative therapy are usually quite good. On the other hand, the patient who has clear-cut signs of cord compression with progressive disability should be considered as a candidate for operation. In such individuals laminectomy with release of pressure on the cord, perhaps along with removal of osteophytic spurs which press against the cord and roots, is the treatment of choice.

It is in those patients who fall between these two groups that the therapeutic choice is not so definite. Thus in our patient we decided, in consultation with Dr. Capps, to advise operation. We reasoned that this man had shown rapid progression of wasting and weakness involving the upper extremities and that a surgical procedure should be attempted to prevent further deterioration. This man is a farmer; thus he needs his strength and agility to remain self-sufficient. For this reason we thought that early operation was indicated, though the patient was told that the results might well not be curative. In fact, he was told that the aim of the operation was to prevent worsening, and that while no such result could be guaranteed, if the progress of the disease were halted, the surgical procedure would be considered successful whether or not any recovery of function occurred.

It is as yet too early to assess adequately the results of the operation. The patient has had a mild postoperative course and after a month perhaps feels some stronger than previously, suggesting that the long term results may be good. Obviously, however, it is too early to make any such categorical statement.

QUESTION FROM AUDIENCE: Dr. Wells, what are the results of surgery?

DR. WELLS: Several series have been published, and the results are not entirely comparable. In general, however, it seems that when an operation is done early, progression to incapacitation can usually be avoided. When the operation is done as a last resort, little improvement results—as might have been predicted.

QUESTION FROM AUDIENCE: Realizing that you can't be entirely certain, what course do you actually expect for this patient?

DR. WELLS: This patient had a relatively short history, and we seem to have caught the disorder in a fairly early stage. I am hopeful that as a result of early diagnosis and early surgery, he will not show further progression of disease of his cervical roots and that cord compression will be avoided. Whether he will have any return

of function, it is simply impossible to predict. I would look upon cessation of progression of his disease as the real aim here. Any improvement would be really an added dividend.

Addendum: This patient has now been followed over a year post-operatively. His sensory signs and symptoms have disappeared. He feels his hands to be stronger, though this is hard to substantiate on neurologic examination. Certainly there has been no progression of his disability.

ARE POSTOPERATIVE NARCOTICS NECESSARY?—B. B. Roe. Arch. Surg 87:912 (Dec.), 1963.

In a study of 600 patients, a program of management was directed toward avoiding the potential dangers of depressing respiratory reflexes and obscuring manifestations of shock (restlessness) with narcotics. Patients in genuine pain which could not be relieved by reassurance or other supportive measures were given narcotics as needed, but only in very small doses. The decision to give narcotics was made in all cases by the attending physician or resident, and never by the nursing staff. The patient was psychologically prepared preoperatively by assuring him that his incision would be securely closed, that some discomfort is a normal consequence of surgery, that early mobility and ventilatory motion are essential for rapid and safe convalescence, and that motion in the operative site will reduce over-all discomfort and disability, despite the initial pain. A survey of the nursing and resident staff who cared for these patients showed that in most cases postoperative discomfort was not increased by restricting or withholding narcotics, and that in many cases the postoperative course was considered more trouble free than in patients who routinely received large doses of narcotics.

CLINICOPATHOLOGIC CONFERENCE

Methodist Hospital*

A Common Disease with Uncommon Manifestations.

This 40 year old white male pharmacist was first seen in the physician's office on March 18 complaining of "flu" of one week's duration, associated with "chronic fatigue." During this week he had had a cough with occasional production of blood streaked sputum. Over the past several years he had had episodes of epigastric burning. These were usually associated with stressful situations, occurred on an empty stomach, and were relieved by eating. On two occasions the pain had awakened him during the night.

Physical examination at this time was essentially unremarkable except for epigastric tenderness. Urinalysis was negative and hematologic studies revealed a mild anemia (Hgb. 10 Gm.). A chest film was negative. Gastrointestinal x-ray examination revealed deformity of the duodenal cap, but there was no evidence of active ulceration.

The patient was admitted to the hospital on May 20 for further evaluation and therapy. The past history was uninformative and a system review was negative. The patient smoked one package of cigarettes a day and denied the use of alcohol. The family history was negative for cancer, diabetes, and tuberculosis. The patient's mother was living and well. The father had died of an aortic aneurysm and hypertension. The patient had 2 children, ages 2 and 4 years. Physical examination was again negative except for tenderness in the epigastrium.

Laboratory studies at this time revealed PCV. values of from 33 to 45% and Hgb. values of from 10.5 to 14.3 Gm. Lactic dehydrogenase was 380 units, transaminase 45 units, febrile agglutinins were negative. Urinalysis was again negative. On Mar. 20 a plain film of the abdomen showed considerable barium in the transverse colon and a film the following day gave similar findings. A barium enema Mar. 23 was normal. An intravenous urogram on Mar. 25 was negative except that the left kidney was noted to be slightly lower than the right. With vigorous purgation the barium was finally cleared from the colon and the patient subsequently was relieved of abdominal distress. The only other significant finding during this hospitalization was a daily temperature spike to approximately 100°. The patient received l-hyoscyamine sulfate (Levsin), q.i.d., and Maalox, 1 hour a.c. and h.s. He was discharged and returned to work.

---

*From the Departments of Internal Medicine, Surgery, and Pathology Methodist Hospital, Memphis, Tenn.

The patient was readmitted on Apr. 6 with complaints of staggering and dizziness for 3 to 4 days. Diplopia had been noted on the day of admission. Neurologic consultation revealed that the patient also had had headache for approximately 3 days, and nausea and vomiting. The headache had become excruciating on the day of admission. There was no paralysis, numbness, or tingling. Neurologic examination revealed no specific weakness or incoordination. Cranial nerve examination revealed no papilledema; gross visual fields were full. There was some weakness of gaze to the left with a severe coarse nystagmus when looking to the left. There was a mild vertical nystagmus and a slight nystagmus with extreme lateral gaze to the right. There was good stereognosis and sensation throughout the body. Abdominal reflexes were normal. There was nuchal rigidity. Lumbar puncture revealed an opening pressure of 220 and yielded grossly bloody spinal fluid.

Admission laboratory data included a PCV. of 36.5%; Hgb. 12 Gm.; WBC. count, 10,400 with 80% segmented neutrophils, 18% lymphocytes and 2% monocytes. Platelets were increased and red cells were slightly hypochromic. Admission urinalysis revealed 1 to 2 RBC. per h.p.f., but was otherwise negative. The lactic dehydrogenase was 460 units. By Apr. 10 it was noted that the patient was not as responsive and a second lumbar puncture revealed a pressure of 600, again with grossly bloody fluid. No laboratory studies were requested on any of the spinal fluid samples.

On Apr. 11 paralysis of conjugate gaze to the left was noted and there was poor control of the left hand. On the following day poor control of the hand was again noted but it was stated that the patient had good grip. Later on Apr. 12 it was noted that there had been some hemoptysis as well as some hematuria. A brain scan on that day was interpreted as within normal limits. By Apr. 14 the patient was much better and bilateral carotid arteriograms were planned for the following day. These studies revealed no evidence of intracranial aneurysm or tumor. Lumbar puncture on Apr. 17 revealed an opening pressure of 290 and xanthochromic fluid. On Apr. 21 a portable chest film revealed a patchy density in both upper lobes, interpreted as pneumonitis. Gram stain of sputum revealed a few gram-negative diplococci. A throat culture ultimately yielded gamma streptococcus and coli-aerogenes group organisms. The patient was given 500 ml. of whole blood on Apr. 23. By Apr. 25th he was more alert and had less nystagmus. By Apr. 26 sputum production was noted and on the following day the chest was said to be clear. Another unit of whole blood was given. A second chest film on Apr. 27 showed little change. On Apr. 29 the patient began having respiratory difficulty again and tracheostomy was done. Much tenaceous mucus was suctioned from the trachea. By later that afternoon the patient was much less responsive. There was more left sided weakness,

respiratory distress, and there were occasional periods of apnea. The patient later became stuporous and expired at 3:15 A.M. on May 6.

The temperature initially was normal, but on Apr. 10 spiked to 105.4°. It then reached 103 to 104° daily until Apr. 18, and thereafter reached about 101° each day with an occasional spike to higher levels. During the hospital course the patient was treated with phenobarbital, chlorpromozine, secobarbital, meperidine, nasal oxygen, and intravenous fluids. Penicillin was given on Apr. 18. Crysticillin was given (600,000 units) b.i.d. from Apr. 21 until Apr. 25 when Mysteclin was started, 250 mg, q. 4 hr.

DR. UTTERBACK: Most of this seems to have been an acute gastrointestinal problem, but eventually the patient was admitted for what seemed to be a very different kind of illness. He came in with staggering and dizziness, diplopia, nausea and vomiting and severe headache. These symptoms of course are not really specific, but when we read that he had nuchal rigidity and nystagmus, it sounds as though he might have had bleeding into the subarachnoid spaces. The last sentence proves this to be the case. The lumbar puncture showed an opening pressure of 220—slightly elevated—and grossly bloody spinal fluid, suggesting that this was a very fresh hemorrhage. The finding of vertical nystagmus and diplopia, even without specific cranial nerve involvement, certainly speaks for a lesion in the posterior fossa. By April 10 it was noted that the patient was not as responsive as he had been earlier; repeat puncture revealed a pressure of 600, and again with grossly bloody spinal fluid. When blood is spilled into the arachnoid spaces a certain amount of obstruction to resorption of spinal fluid occurs and the pressure usually does go up to that extent. On the 11th of April he was noted to have paralysis of conjugate gaze to the left and poor control of the left hand. It seems clear that the patient did not have muscular weakness and did not have paralysis but he did not have good control of his left hand and my suspicion would be that he had some abnormality of the cerebellar hemisphere. Again he had evidence of some bleeding-clotting disturbance; he had hemoptysis and hematuria. On the 14th he had had bilateral carotid arteriograms and these gave no answer. It seems quite possible, however, that the lesion was in the posterior fossa, so this doesn't really prove there was no vascular lesion inside the head. Lumbar puncture on the 17th revealed an opening pressure of 290 and xanthochromic fluid. He may or may not have had further bleeding; xanthochromic fluid could persist for several days after hemorrhage. About this time he had evidence of complicating respiratory disease; a tracheostomy was performed. He became less responsive and terminally he developed left sided weakness.

The temperature initially was normal but on the 10th of April it spiked to 105° and from then on he maintained a considerable elevation of temperature. Dr. Steffee gave the further information that his temperature was kept at about 101° after the 18th by artificial means—a "hypothermia" device. I assume that his temperature would have been considerably higher without that. I am not sure whether this temperature elevation was related to infection or to a central disturbance of temperature control. He certainly did not respond to antibiotics.

Now we must consider what explanation would best account for an intracranial bleeding probably associated with cerebellar involvement. It is conceivable that he had frontal lobe involvement; cerebellar and frontal lobe signs are sometimes difficult to distinguish. Possibly there was an infectious process in the central nervous system, but more likely this was just a complication related to systemic infection. An aueurysm of the circle of Willis in the posterior fossa is a rather rare occurrence, but such do appear. I think the figures we have in the City Hospitals over the last two years indicate something like 4% of the aneurysms are in the posterior fossa. An arteriovenous anomaly such as an angioma in the cerebellum is a far more frequent finding. A so-called primary hemorrhage into the cerebellum is not a rare thing, but it is usually very hard to identify. I think that might be a reasonable explanation here. A metastatic carcinoma that bled is another reasonable one. I wouldn't be inclined to interpret this gastrointestinal problem as being tumor. It is not the usual thing for a tumor of the gastrointestinal

tract to metastasize to the central nervous system, though this can happen. If such did happen, there should be an intermediate metastasis to the lung and then on to the central nervous system. This is unlikely to be a bleeding metastasis, but it could be. My first choice would be hemorrhage from the cerebellum, either an angioma or an aneurysm. Second would be metastatic carcinoma, and third on the list would be an abscess. I wonder if we could take a look at the X-ray films before we go on with the discussion.

DR. HALFORD: The first film, made the day before admission, reveals two small nodules in the right upper lung; one near the mediastinum and a smaller one just above and more peripherally located. The second chest film was made almost a month after the first. He had developed diffuse densities in both lungs. The last chest film was made just a few days before death and again one sees shadows in both lungs which have developed since the initial film. The GI series revealed some ulcer deformity of the duodenal bulb, but it was not too remarkable. The barium enema was negative. You notice on the IVP that the renal shadows themselves look all right and functioned well, but the left kidney is a little lower than the right. We worried about the possibility of something pushing this kidney down. Following this a cerebral arteriogram and brain scan were done and interpreted as normal.

DR. UTTERBACK: I certainly don't see any abnormality in the arteriogram and I would have to defer to the radiologists interpretation of the chest films. As a matter of fact this whole course is a very rapid one. He came in March 18 to the physician's office and he was dead on May 6.

DR. HALFORD: The densities in the initial film have blossomed into this. We really couldn't exclude this being some type of lesion other than simple pneumonia.

DR. STEFFEE: I asked three physicians in particular to lead off the floor discussion. These men are listed in alphabetical order, so first . . . Dr. Alley.

DR. ALLEY: We seem to be discussing this a little bit in paragraphs, and I was interested in the first paragraph. I did want to emphasize again that this man's illness was of short duration. Actually, after the first hospitalization and after consulting a physician for the first time, this man returned to work. I don't know how long he worked. He came in the second time, acutely and chronically ill. Now, there are two or three things in the first paragraph. First, this man's chief complaint on March 18th was "flu." Well, I think most of us feel that there is a chest component in most of the things we call "flu." This man had a cough; he had a blood streaked sputum; he had chronic fatigue; he had anemia; and he had fever. In the protocol the first x-ray was reported as negative; but I think it has been pointed out that it was not entirely negative. I really think that we have enough basis from the man's complaints in the first paragraph that we must consider the chest. Maybe this is hindsight but perhaps we should have investigated the chest a little further. Since I know the diagnosis in this case, I would rather reserve part of my remarks until a little later.

DR. STEFFEE: Thank you, Dr. Alley. Dr. Bicks, will you comment on the gastrointestinal problems particularly?

DR. BICKS: I know the diagnosis too.

On first reading this protocol one gets the impression that this is a tired business man who probably had an ulcer and came to the doctor because he had the flu and all of a sudden everything went "haywire." His disease involves many organ systems, particularly the central nervous systems, pulmonary, gastrointestinal, and genitourinary, with laboratory findings in the blood and spinal fluid. In terms of the gastrointestinal tract producing this whole picture, one would start with a systemic infection involving chest and gastrointestinal tract . . . this could be one of the fungus diseases, actinomycosis in particular. The second group of diseases to consider are the acute collagen diseases, but they usually do not affect the chest primarily. Periarteritis nodosa could explain the central nervous system and gastrointestinal complaints. The last group to consider is neoplastic disease. Most neoplasms of the gastrointestinal tract spread locally and then to the liver or hilus of the lung. Only a few of them are characterized by diffuse systemic

spread with difficult localization of primary site. Among these is a type of cancer of the stomach, in which the primary focus is microscopic, yet the metastases are widespread. Rarely one finds very tiny carcinomas of the pancreas which are associated with widespread metastases and peripheral bleeding and thrombi in particularly. Even without knowing the diagnosis, the gastrointestinal tract has nothing to do with this man's clinical picture. On reviewing the GI series one notes that in addition to the deformity of the lesser curvature of the bulb, the stomach was displaced laterally to the left. I wonder about the size of the liver and metastatic disease.

DR. HALFORD: That would go along with the displaced kidney.

DR. STEFFEE: Is Dr. Maddux here to discuss the urologic problems.

DR. MADDUX: Unfortunately I can't confine my remarks to one paragraph like Dr. Alley, mainly because they put the urine on both pages.

It appears to me that the original urinary findings were minimal, that is, a negative urine. But nothing was mentioned about the prostate which should be considered in any of us. The fact that his left kidney was low I think is significant. It was quoted that the kidney may be low on the left side in about 15% of the cases normally. I feel that this is a little high. I think possibly the x-ray department here will agree with me that it occurs maybe in 2% or at the most 5% of the individuals in routine IV urograms. The left kidney is very seldom lower than the right particularly to this degree. Anytime you have this situation, it behooves one to think very seriously about retroperitoneal masses, collagen diseases, tumors, metaplasia, hemorrhage (adrenal apoplexy), or some mass that has displaced the kidney, you will be right more times than not.

As the man's illness progressed, the urinary findings became a little more prominent and terminally he had hematuria as well as hemoptysis. This could be on a septic basis or if malignancy is present, actual dissemination of blood stream multiple metastatic septic emboli producing hematuria. He was having fever of 105 at the time. There is no mention of a blood culture. This is probably on the basis of a blood stream infection of a central nervous system lesion with peripheral dissemination of septic or malignant foci.

DR. STEFFEE: Are there comments or questions from the floor?

VOICE: There is no mention made about the man's heart; was there a murmur?

DR. STEFFEE: None was described. The physical examination stated that the chest and heart were negative.

VOICE: Were there any white blood counts made when the temperature was so high?

DR. STEFFEE: The temperature was highest between April 10 and 18. A white count on April 22 was 12,950, and on the 24th, it was 12,400. Those are the only ones except for the admission counts. Yes, Dr. Diggs.

DR. DIGGS: The patient was bleeding in three sites: brain, lungs and kidneys. No mention is made of skin petechiae or ecchymoses, or bleeding from the gums or the GI tract. No mention is made of the platelets. I think when a patient is bleeding from more than one site, this is systematic bleeding caused by something wrong with the blood or the blood vessels. If there is nothing wrong with the circulating blood, platelets, or other component factors, it must be vascular. To put a bleeding tumor in three places, the most likely thing is a hypernephroma with metastases to lungs and then to the brain.

I think whoever did the laboratory examination of that bloody spinal fluid was amiss, because sometimes a bloody spinal fluid will show carcinoma cells, and we miss the possibility of a positive diagnosis in such a case.

DR. STEFFEE: To answer your question about platelets Dr. Diggs, no platelet count as such was done. On the stained smear the platelets were said to be "slightly increased" on April 22; on the 24th, they were "increased."

DR. DIGGS: Sometimes bleeding can be due to multiple thrombi. Pancreatic tumor particularly produces embolic phenomena with hemorrhage on an embolic basis. Sometimes multiple telangiectasis or hem-

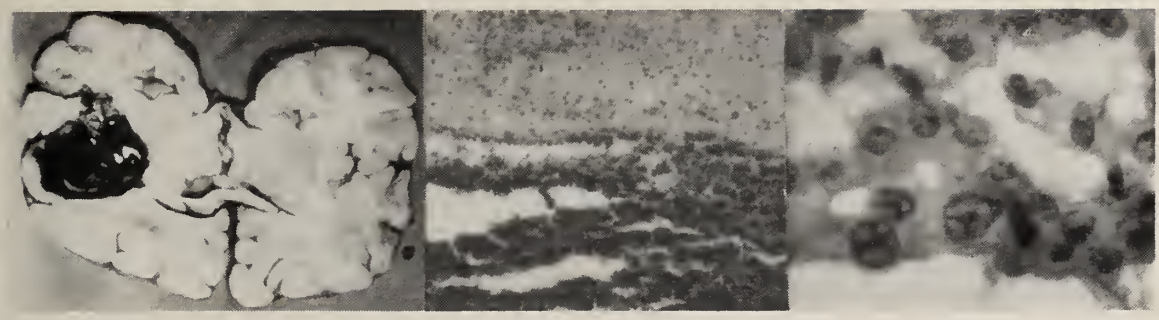


FIG. 1. Cerebral hemorrhage; FIG. 2. Meningeal and cerebral hemorrhage (X 100); FIG. 3. Adrenal mass (X 300).

angiomas will involve multiple sites with focal hemorrhages.

DR. STEFFEE: Are there other comments or questions from the floor? Then we shall proceed with the findings.

We have a man here who had some brain hemorrhage. You will see in figure 1, a section of brain with a large area of hemorrhage. Now, he had a few other problems. . . . May I have the next slide? He also had a displaced left kidney and this is the mass that came from this area. The next one is a cross section of this mass, which is essentially a hematoma. This man had pulmonary hemorrhage (hemoptysis); here is a lung with an area of hemorrhage. So far we haven't learned much. Next is a photomicrograph of the brain (Fig. 2). The dark area is meningeal surface and you can see this is massive hemorrhage with a little bit of hemorrhage in the adjacent superficial layer of the cortex. I do not see anything I want to call a granulomatous process. Another area shows some hemosiderin in meningeal phagocytes, which simply indicates that he bled once before. A section of the hemorrhagic area of lung shows an area of essentially pulmonary infarction with some inflammatory response at the very edge of it. No vascular thrombi were encountered. Other sections of lung show some pulmonary fibrosis. These alveolar walls are a little bit thicker than they should be, and perhaps this will help us to understand the picture of pneumonitis we saw on x-ray. This is an old process; it does not fit at all with the rapid downhill course. Next, for the benefit of the young men in the audience, is a section of testis. Remember this chap was only 40 years of age and you see that there is virtually no spermatogenesis. The bone marrow is a hypercellular marrow if anything; with many islands of erythropoiesis and abundant megakaryocytes. So this does not seem to be a primary hematologic problem. In the sections of the wall of the mass in the area of the left adrenal we see fibrous tissue and a little hemorrhage at the edges. There are viable cells in the center, resembling adrenal tissue. There is one nest of cells with large nuclei, and coarse chromatin (Fig. 3). Figure 4 is a cut through the cerebellum where mixed with the hemorrhage is a kind of gray to yellow friable material. A photomicrograph here shows two bizarre mitotic figures (Fig. 5). The last is a close-up of the bronchus and push-

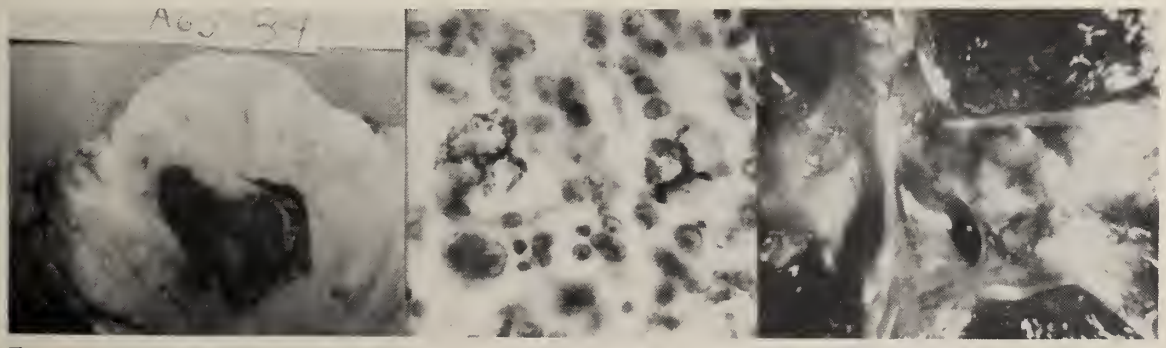


FIG. 4. Cerebellar hemorrhage and tumor; FIG. 5. Atypical mitoses (X 300); FIG. 6. Intrabronchial mass.

ing into the bronchial lumen is a mass of tumor which is the primary neoplasm in this patient (Fig 6).

In summary, this is a patient with a relatively common disease but with very uncommon manifestations. The primary lesion is an indifferentiated bronchogenic carcinoma, with symptomatology produced largely by hemorrhage in the cerebral metastasis. What is the nature of this mass above the left kidney? It is our considered opinion that this probably was a metastasis in one part of the adrenal with massive hemorrhage which compressed and destroyed most of the adrenal. We found only a small area of adrenal tissue in many sections; it was fortunate that this also contained one little nest of tumor. Now, are there any other comments or questions?

DR. ALLEY: Was that right or left lung you were showing?

DR. STEFFEE: Right.

DR. UTTERBACK: May I request a clarification? I still insist that it wasn't cerebral hemorrhage that caused him the greatest trouble, it was cerebellar.

DR. STEFFEE: I think you are right.

DR. ALLEY: I did a little reading. First, I would like to interpret the x-rays. I think those few shadows on the first film are significant. One of those apparently did represent the man's primary lesion. The next two films I believe were films on a sick man unable to raise his secretions, but the first films I think showed the lesion. Let's talk a little bit about the metastasis. The lesions close to the hilum usually spread by the lymphatics. First involvement is the carinal nodes then the peritracheal nodes, peri-esophageal and then the supraclavicular. The more peripheral lesions are usually spread through the blood vessels and the order of metastasis is the liver, the adrenals, brain, bodies of the vertebrae, and the long bones, usually the hip bone. Then we have, of course, direct extension to the thoracic cage and mediastinal structures. Most of these people die of metastases rather than their primary lesion, as this man did. I think we would all agree that this man did die of the brain lesion. It is said that 25% of the patients who are sent to the hospital with brain tumors prove to have a metastatic lesion from the lung. Of course, the percentage of metastases to these various sites varies with series, but I think that most show brain metastasis in about 25 per cent. Metastasis to the liver is probably greater than that, and to the adrenals in about 25%, and to the hip is 25 per cent.

VOICE: Were there any lesions in the liver?

DR. STEFFEE: No. There were very fine little gray spots speckled all throughout it so that Dr. Flentje cut umpteen hundred and fifty sections of liver, but there is no tumor in any of them.

DR. COLE: I would like to say a word concerning the management of bronchogenic carcinoma. This disease is getting to be an epidemic affliction of males and the treatment has been entirely unsatisfactory up to the present time. Using all accepted methods including early surgical resection and the radiation, either by conventional methods or by cobalt, it is difficult to achieve a five year survival rate of over 3 or 4%, if one counts all patients with this disease. In an effort to improve these results, we have lately been attempting to treat all bronchogenic carcinomas with full cancerocidal dosage of radiation before attempting surgery. The radiation is given in a period of about thirty days; approximately six weeks is allowed to pass, and then, if it seems indicated or possible, excisional surgery is carried out.

There seem to be several advantages to this approach. In the first place, radiation certainly does, at least, partially sterilize the periphery of the tumor, and it may make a larger margin of normal tissue available around the neoplasm at the time of operation. In the second place, we have seen some instances where it appeared the inoperable tumor was converted to an operative stage by the reduction in size achieved from radiation; and in the third place, enough time elapses so any silent metastasis already present should be manifested, and one can sometimes be prevented from performing major surgery in a patient with tumor implants in distant areas. It is too early to know whether this approach will make any substantial difference

in the results of treatment of this disease. At the present time we do not think that the operative hazard is appreciably increased, and we are planning to continue this approach until a significant number of patients have been treated.

DR. ALLEY: I don't think anything could have been done to make any difference in the outcome of this patient. Certainly his metastasis had taken place when he first consulted the physician.

DR. BICKS: I would like to have someone explain the hemorrhagic tendencies this man had.

DR. STEFFEE: I have no sound explanation for this phenomenon.

TOXOPLASMA ANTIBODIES AMONG COLLEGE STUDENTS—J. S. Remington (860 Bryant, Palo Alto, Calif.), W. Dalrymple, L. Jacobs, and M. Finland. New Eng. J. Med 269:1394 (Dec. 26), 1963.

Serum samples for toxoplasma serology were obtained at the beginning of the school year and again 7 to 8 months later from 359 students at Harvard University. The dye and hemagglutination (HA) test was positive in 70 (20%) of the initial sera. There was remarkable stability of the dye and HA test antibodies; these did not vary in titer more than four fold during the period of study except in the few instances discussed. There was one conversion in the dye test from negative ($<$ 1:16) to positive (1:8,192) and one instance of significant rise from an initially low titer (1:32) to 1:2,048. Twenty-seven per cent of the titers in the dye test were at a level of 1:1,024, or greater. One student had a stable titer of 1:32,000 in the dye test and comparable titers in the HA test during the period of study and a titer of 1:16,000 one year later. The persistence of high dye test titers in the student population is discussed in relation to the problem of the diagnosis of acute toxoplasmosis in such individuals.

President's Page



Dr. Cannon

The purpose of advertising in our medical Journal and pharmaceutical companies exhibiting at our State Association's Annual Meeting is to disseminate information or present an available service in the hope of creating a favorable impression. This general statement is true of the advertisements that appear in our Journal as well as others published throughout the Country. There is, however, an additional objective in the messages of the pharmaceutical concerns for they represent an effort to help the physicians to know how best to help his patients.

It is realized that many of our physician members do not visit with the exhibitors at an annual session or study the advertisements appearing in our Journal. It is the purpose in this letter to invite your attention and consideration to this matter. Advertisers in our Journal and exhibitors at our Annual Meeting have decreased greatly in the last couple of years. This is due to several reasons, but principally to decreasing interest shown by physicians. The pharmaceutical companies and others advertising in our State Journal make possible the financial stability of the Journal and in like manner, exhibitors at our meeting, through purchase of exhibit spaces, help to finance our annual meeting and make it unnecessary for a registration fee.

Through reprints, samples, leaflets, letters, detail men and professional journals, each pharmaceutical advertiser makes an effort to contribute to physician's continuing education. Those of us who close our minds to this available help are giving our patients less than our best. When a detail man is next shown into your office, thank him and his employer, through him, for making possible this up-to-the-minute, helpful system of self-education which is presented to us through the Journal of the Tennessee Medical Association.

In like manner, during the 1964 Annual Meeting in Memphis next April 12-15, it will help your Association if you will take time to tour the exhibit area, and talk with the representatives of our exhibitors who spend their money and time toward meeting an educational need and at the same time greatly contributing to the financial sponsorship of our annual meeting.

With further reference to the 1964 Annual Meeting, I need not emphasize the importance of the deliberations of the House of Delegates in preparation for the critical months ahead. This year, I hope that everyone will take renewed interest in the Association's policies and make the effort to attend the meetings, keep informed of the actions of the House of Delegates, and the Reference Committees. As you know, every TMA member is welcome to present his views on the topics being considered by the Reference Committees.

I urge you to mark this event as a "must" on your 1964 calendar.

Bland W. Cannon, M.D.

President

THE JOURNAL
OF THE
TENNESSEE MEDICAL ASSOCIATION
Published Monthly
Devoted to the Interests of the Medical Profession of Tennessee
Office of Publication, 112 Louise Avenue, Nashville 5, Tenn.

Acceptance for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized July 15, 1932.

Copyright for protection against republication. Journals of the American Medical Association and of other state medical associations may feel free to quote from this Journal whenever they desire merely giving credit to this publication.

Address papers, discussions and scientific matter to R. H. Kampmeier, M.D., Editor, B-4211 Vanderbilt University Hospital, Nashville 12, Tennessee
Address organizational matters to Jack E. Ballentine, Executive Director, 112 Louise Avenue, Nashville 5, Tenn.

R. H. KAMPMEIER, M.D., Editor
Vanderbilt University Hospital, Nashville

EDITORIAL BOARD

ADDISON B. SCOVILLE, JR., M.D.
2104 West End Ave.
Nashville 5, Tennessee

ALBERT WEINSTEIN, M.D.
Medical Arts Building
Nashville 12, Tennessee

COMMITTEE ON SCIENTIFIC WORK AND POST GRADUATE EDUCATION
R. H. KAMPMEIER, M.D., Chairman
W. POWELL HUTCHERSON, M.D., Chattanooga
ROBERT P. MCBURNEY, M.D., Memphis
EUGENE J. SPIOTTA, M.D., Memphis
(Specialty Society Representatives to be named)

FEBRUARY, 1964

EDITORIAL

DISEASE AND DISABILITY AMONG THE AGED

The topic of medical care is a major one in politics and especially in the political year of 1964. No matter what one's viewpoint on the subject, everyone becomes a bit confused as to the health or disease or disability of the person, say, over 65 years of age since medical care seems to be linked to a certain mile-post in a person's chronologic age. There is so much talk about the topic that every once in a while I find I must re-orient myself in this area, and I believe as medical persons, we at least should know some facts.

To recapitulate what has been said so often and has become thread-bare, we have a population of some 16 or 17 million over age 65 because of the advances made in medical science. Osler applied to pneumococcal pneumonia the phrase "Captain of the Men of Death," which John Bunyan had used for consumption. And well he might, for a disease with a mortality rate which reached to beyond 50% in those over 60 years of age. He also described bronchopneumonia as "the friend of the aged" since it relieved the elderly who were in congestive failure, or who had emphysema, or developed aspiration pneumonia following a "stroke," or were in uremic coma, or those who were confined to bed because of a fractured hip. The control of these pulmonary infections and the newer surgery and anesthetics which have extended life have given us this aging population.

Someone has said that "there are no diseases of old age, only diseases of old people." This points up the differences which must be emphasized between chronic disease and chronic disability. Chronic disease implies the possibility of improvement with medical care. Chronic disability may result from disease, but more often than not represents degenerative changes for which little may be done other than possibly by rehabilitative measures. A cataract may be removed but some disability remains. Osteoarthritis may be disabling, as may the residual hemiplegia from cerebral thrombosis. These, as senile dementia are irreversible and cannot really be described as diseases by definition.

First, what about that large segment of the population in the mental hospitals? There are 10,700 beds set aside for the mentally ill, or one-third of the total hospital beds in Tennessee. Exclusive of federal hospitals there are 9 with a total bed capacity of 9,250 supported by the Tennessee taxpayer.[1] Of these patients 7,339 are maintained in the three hospitals which provide most of the domiciliary care—Eastern, Central and Western State Hospitals, each with over 2000 beds. The problem of domiciliary care is pointed up by some comparisons from the totals of these three hospitals for the year 1961-62, in terms of admission rate (%), discharge rate (%), death rate (%), "residents," and percent of hospital population as of June 30, 1962, as related to age:[2] For age 45-54 the figures were, 20%,

[1]Annual Report of Hospitals in Tennessee 1963. Nashville. Tenn. Dept. Public Health, 1963.

[2]Annual Report of Mental Health, State of Tennessee 1961-62. Nashville. Dept. of Mental Health.

23%, 9%, and 1,592 (22%); for age 55-64—12%, 10%, 15%, and 1,632 (22%); for age 65-74—7%, 5%, 28%, and 1,103 (15%); for age 75-84—5%, 2%, 33%, and 634 (7%); for age 85 and over—1%, 0.3%, 10%, and 130 (2%). It is obvious as anticipated that the discharge rate goes down and the death rate up with advancing age. In all honesty there are factors other than longevity in accounting for the rate of admissions of the elderly to the State's mental hospitals. As has been pointed out by many, the urbanization of large segments of the American population has made the care of elderly parents or grandparents an inconvenience. With plenty of room on the farm, and a family home-bound on week-ends by dirt roads and horse and buggy, the oldsters were not an inconvenience but even an asset, for "paw" could chop wood and "maw" could shell peas, and if they were forgetful it did not make too much difference. In the city, the small house leaves the oldsters underfoot all the time, and they *do* interfer with going out for a week-end of fishing or water-skiing, and so the forgetfulness offers a good excuse for putting "maw" or "paw" in one of the State's mental institutions.

The point is that a certain good sized segment of old people will be receiving attention on a domiciliary basis and with an ever increasing burden on the taxpayer. (The average length of stay in Tennessee's mental institutions was *263 days including all ages.*[1]) To the 162 nursing homes (4333 beds) in Tennessee were admitted in 1962, 3,849 patients. (The average length of stay was *308 days.*) To the 66 homes for the aged (1,176 beds) in Tennessee were admitted 338 patients. The average length of stay was *about 3 years.* These figures give us some magnitude of the problem of the aged in terms of hospital or nursing home care, and obviously neither current nor proposed federal legislation is applicable in these areas of disease or disability. (V.A. hospitals supported, of course, by federal funds, are an exception.)

Data on chronic conditions, disease, or disabilities, can be found in the statistics gathered by the U.S. Public Health Service,[3] which carries on a contniuing survey and reports the results periodically. The last appeared in 1962 and covered two fiscal years 1959 to 1961. The figures represent 76,000 household interviews covering 250,000 household members. It is important to recognize that the *chronic conditions causing limitation of activities* in these statistics do not represent medical evaluations but rather laymen's statements. (Persons in institutions are *not* included. This aspect of medical disability was reviewed above.) Of the 74 million persons reporting one or more chronic conditions it appears there are 19 million persons in the noninstitutional population who have a limitation of activities due to chronic disease or impairment. Limitation of activity may be major, i.e. limiting ability to work, do housework or go to school. Other activities, however, may also be limited. About 3½ million of those who could not perform, or were limited in the performance of their major activity were under 45 years of age. There were about 10½ million with such disability above age 45.

When this segment of the population is broken down at the magic age of 65, the statistics can be presented simply as follows. From 45-64 years, 39% have no chronic condition; at 65 or above 21% have no chronic condition. Between 45-64 years 10% have limitation in amount or kind of major activity; at 65 and above this has more than doubled, 23 percent. Between 45-64 years 3% cannot get around alone and 0.5% are confined to the house; at 65 or above 10% cannot get around alone and 3% are confined to the house. Above age 65 years the major causes of limitation of activity were heart conditions in one-fourth, rheumatism in one-fourth, visual impairment in 10%, with practically equal incidences of paralysis, "nervous condition," high blood pressure. (It is significant that limitation in getting around appeared almost equally in those who had retired and those who still were attempting to be active.)

---

[3]Health Statistics from the U.S. National Health Survey—Chronic Conditions Causing Limitation of Activities (July 1959-June 1961) HEW, Public Health Service. Series B-No. 36—U.S. Government Printing Office, Washington. 1962.

It is important to recognize this segment of the older population with limited activity and the small number who are homebound. The osteoarthritic and hemiplegic patients have nothing to gain medically except by symptomatic and rehabilitative management. The cardiac may require hospitalization with bouts of failure, the one with a cataract may need an extraction and may thus become more mobile—this is pretty much the medical picture of chronic disability. The large number of oldsters who are ambulant emphasizes the importance of medical care in the office and home. Even here, the average visits per year are only 6.8 for those over 65, as compared to an average of 5 visits for the total population.[4]

Hospitalization for disease, of course, cuts across all ages, and the oldsters naturally, because of degenerative processes, will show the higher rates. Nevertheless it should be of interest that in 1958-59, of the 2063 Tennessee citizens hospitalized under the Indigent Hospitalization Program,[5] 391 were under age 15, and 284 were 65 or over. The rates per 100,000 population were: 126 for those less than one year old; 73 for age 15-24 years; 85 for 45-54 years; 106 for ages 55-64, and 73 for age 65 and over. The over all rate was 64 per 100,000 population.

The average length of stay in the hospital under the Tennessee Indigent Hospitalization was longest in the older aged group. The average for all was 11 days; for infants under one year 11 days; for age 25-44 years 9 days; for 45-64 years 13 days and for 65 years and over 15 days. When we recognize that among the 2063 hospital admissions were 234 for pregnancy with an average hospital stay of 4 days we see an influence upon the average hospital stay of 7 and 9 days for the groups 15-24 and 25-44 years. Malignancy, strokes and cardiac disease extend the days in the older years. The nationwide figures on hospital stay coincide with the Tennessee data for the indigent.[6] On the aged side one must recognize that 10% remain hospitalized for 31 days or longer and that this 10% accounts for 39% of the total hospital days for this group.

This editorial review has no purpose in terms of conclusions at the moment. But if other physicians like myself develop a loss of perspective by the constant emphasis on medical care of the aged, it seems a pause and re-orientation is necessary at intervals. It may be helpful to have some knowledge for discussion with lay friends who really are in a beknighted state as the result of the news propaganda. Finally, I believe, as a medical person views the medical scene from age "65 years or over" he must be impressed less by the problems of the aged, and more by the disabled and the need for comprehensive medical care for persons in the age groups who should contribute to the economic soundness of the nation, and to the maintenance and continuity of a stable family life, hoping for a better citizenry graduating from adolescence to maturity in a healthy home environment.

R. H. K.

[4]Health Statistics, Volume of Physician Visits, United States, 1957-1959. HEW, U.S. Public Health Service. 1960.

[5]Indigent Hospitalization Program in Tennessee, 1958-1959 (Annual Report) Tennessee Dept. of Public Health, 1960.

[6]Hospital Discharges and Length of Stay: Short-Stay Hospitals, United States 1958-1960, National Health Survey, U.S. Public Health Service, 1962.

Special Item

Present Status of Retirement Plans for Physicians

William T. Satterfield, M.D.,
Chairman TMA Committee on Insurance,
Memphis, Tenn.

The focus has been on retirement planning for physicians in the past year. There has been a deluge of ways and means of preparing for later years in the medico-economic literature. This was undoubtedly occasioned by passage of HR-10 or Keogh legislation in the fall of 1962. This law was long awaited and has to do with providing some tax benefit for the self-employed in an attempt to reduce the disproportion in tax benefits between employees of corporations and those who work for themselves.

The new law left much to be desired in

narrowing the disproportion, but the whole subject of retirement for physicians as self-employed individuals has been thoroughly publicized. It is time to survey the problem at its present status.

Although physicians in private practice have incomes comparable to those of other professions and comparable to corporation executives with similar years in service, their retirement assets fall short of the executive group. Comparison of average retirement incomes provided give the corporation employees an edge of 33½ to 50%.

A survey questionaire by a professional management firm in Michigan revealed that only four of ten physicians admitted to assets at 65 years of age sufficient to provide an income of $12,000 annually without the use of capital. This retirement income is reasonable for a physician who has practiced for thirty to thirty-five years and has elevated his standards.

The business executive is able to provide for his "sunshine" years because he has tax deductibility of up to 15% on his salary, has frequent offers of stock options and profit sharing plans, has benefit of retirement agreements (deferring some of his income) and is in a better position to interpret good "investments" because of his business world contacts.

HR-10 was intended by its authors to equalize some of these differences which are greatly in favor of the corporation employee. Unfortunately it was not the panacea expected. Tax deductible amounts were more limited for the self-employed, tax treatment at maturity was treated as ordinary income in place of capital gain, and the self-employed employer with more than one employee obtains a doubtful saving. HR-10 funds are closely guarded by the law as to their use before maturity at 59½ years (10% tax penalty), and the requirement of complicated reports to the Revenue Bureau make the plans costly to operate. Many physicians have carefully weighed the advantages and found much to be desired. The law is a beginning and liberalization (already submitted to Congress by the original authors) may be forthcoming in future years.

With HR-10 of doubtful benefit to the majority of practicing physicians, the self-employed practitioner is in the position of having to build his retirement assets and income with "after tax" dollars. Methods to accomplish this purpose are available, but they require some planning. The younger the physician is when he begins some program, the more successful his accumulation of assets is.

Medical Economics tells us that the medium income for physicians in private practice in this country is approximately $25,000 net annually, and that the average physician spends $15,000 for personal expense. Add to this $3,500 for taxes, $1,500 for payments on his home and $1,500 to $3,000 for protection insurance, college expenses for children, etc., and the usual "10%" for investment is a realistic figure. Purchase of a home is an investment but not one that provides retirement income. Cash values of protection life insurance may be used for retirement income, but this reduces estate assets.

The physician who "invests" $2,000 to $2,500 each year, accumulates $60,000 to $75,000 in his average thirty lucrative working years. Put this amount in the bank at even 4% interest, and at 65, there is a retirement fund of $130,000 to $150,000. But the doctor who requires $1,000 a month to retire comfortably and does not want to deprive his estate of his hard earned assets, requires assets of $250,000 to $300,000 safely invested, to provide his retirement needs. How can he build up his $2,500 savings a year to the needed amount?

Some physicians invest wisely in real estate or oil wells or "special situations" and build their savings to the requisite amount easily. Unfortunately these doctors are the exceptions. This method cannot be depended upon.

Tax exempt bonds with benefits up to 8% after tax in comparison with taxable income, but with declining value of principal with inflation would not make the grade. The purchase of annuities is predicated upon the use of principal to provide the necessary retirement income.

The value of our dollar has decreased from 100 cents in 1940 to 46 cents in 1962. This process is apt to continue. The one investment that has kept ahead of this

process of inflation is in the equities of good corporations—common stocks of companies that are progressive and grow with the national economy.

The average physician with the average income, average savings and some planning can make his retirement successful if our economy continues on its upward grade. Many individual stocks and many mutual funds have more than kept pace with the economy and with inflation. It is entirely possible, however, to lag behind in the purchase of the wrong equities. Management of investments is the key to success.

So what is the best planning for the average physician for a successful financial retirement? Several medical organizations have instituted plans that are successful so far and have promise of continuing to be so.

These organizations have utilized the principles of lower priced group purchases, periodic savings and "dollar averaging" (monthly), group employment of expert investment management, diversification, the safety and liberal maturity options of a bank as trustee, balance of investment by purchase at low association rates of special "pension life" retirement insurance with the protection of a death value in earlier years, lower cost of investing in groups, attractive guaranteed annuity options not offered individuals, and no "loading" cost. These principles are utilized in programs that offer, in effect, a private mutual fund with expert management, safety of a bank trustee and balanced, if desired, by the special, lower cost pension life insurance for protection part of the fund in guaranteed annuity dollars.

Several state and local societies have these programs established. The AMA has such a plan for HR-10 use.

The tax on net income (and capital gains and losses) is passed on to the participating physician just as mutual funds are taxed, but, after expenses of the trust and considering the facts that these investment funds are "growth" orientated and have low income in favor of capital gains (largely taken at maturity), the taxability is not an important item.

These plans are recognized as the best that can be obtained with the present tax status. And, as the AMA has recognized, this is the best planning even when tax benefits are offered. Those trusts offer the "average" physician his opportunity of sufficient retirement assets, if he does not wait too long before beginning his retirement planning.

DEATHS

Dr. William A. Tyler, 64, Kingsport, died January 2nd at Holston Valley Hospital.

Dr. William Wallace Tribby, 54, Memphis, died December 18th at the Veterans Administration Hospital in Murfreesboro following a long illness.

Dr. Louis David Zeidberg, 57, Nashville, died December 27th as the result of a heart attack.

Dr. D. N. Williams, 84, Chattanooga, died January 7th after a long illness.

Dr. James Buford White, 80, Lewisburg, died January 5th at Leonard Hospital.

Dr. William B. Burns, 94, Abilene, Texas, died January 26th. Dr. Burns was a veteran member of the Memphis and Shelby County Medical Society and the TMA, and was president of the Tennessee Medical Association in 1921-22.

PROGRAMS AND NEWS OF MEDICAL SOCIETIES

Memphis-Shelby County Medical Society

The assistant director of the American College of Surgeons, Dr. James H. Spencer, discussed hospital emergency rooms at the meeting of the Society on January 7th. Dr. Spencer was assistant professor of anatomy at the UT College of Medicine from 1927 to 1929. A diplomate of the American Board of Surgery, he is a fellow of the American College of Surgeons, Royal Society of Medicine in England, and American Association for the surgery of Trauma.

Dr. Neil K. Weaver, Medical Director of the Humble Oil and Refining Company, Baton Rouge, Louisiana, was the guest speaker at the meeting of the Society on February 4th. His subject was, "Returning the Cardiac to Work".

Sessions of the House of Delegates were held in conjunction with the meetings in the auditorium of the Institute of Pathology.

A European tour will be sponsored by the Memphis and Shelby County Society in 1964. Memphis physicians will leave on

April 17 for stops in Paris, Venice, Florence, Rome, Nice, and will return to Memphis on May 5th.

Knoxville Academy of Medicine

The Academy's regular monthly meeting was held on January 14th in the Academy of Medicine Building. Mr. Jim Foristel, an AMA legislative representative in Washington, D. C., was the principal speaker and his subject was "An Assessment of the Washington Scene".

Nashville Academy of Medicine and Davidson County Medical Society

The quarterly meeting of the Academy, combined with hospital staff meetings, was held on February 11th at the Hermitage Hotel. Following the staff meetings and a business session, the scientific program included: "Carcinoma of the Cervix", by Dr. Langdon Parsons, professor of gynecology, Boston University; "Malabsorption Syndromes in Infancy and Childhood", by Dr. Harry Shwachman, associate clinical professor of pediatrics, Harvard Medical School, and president of the New England Pediatric Society; and "Disseminated Blastomycosis—Manifestations, Diagnosis, and Treatment", by Dr. Fred Allison, Jr., associate professor of medicine and assistant professor of microbiology, University of Mississippi.

Chattanooga-Hamilton County Medical Society

The February 4th meeting of the Society was held in the Interstate Building Auditorium. The program consisted of a paper by Drs. Wm. L. Headrick and Eugene Ryan, entitled "Incidence of Carcinoma in a Small Hospital"; an interesting case report by Dr. Cecil E. Newell; and Mr. Arthur G. Vieth, professor of economics of the University of Chattanooga, spoke on the subject, "Tax Cut".

NATIONAL NEWS

The Month in Washington

(From the Washington Office, AMA)

Proposals to provide limited health care for the aged under social security continue to be the most important legislation before Congress so far as the medical profession is concerned.

In his State of the Union message to Congress, President Johnson labeled it "must" legislation and asked for Congressional approval before the end of this summer.

The House Ways and Means Committee late in January wound up hearings on the King-Anderson bill, the Administration's medicare legislation. The hearings had been interrupted by President Kennedy's assassination.

The committee—with a majority of its members believed still to be opposed to such legislation—did not indicate immediately when it would act further on the bill.

In commenting on the State of the Union message, Dr. Edward R. Annis, president of the American Medical Association, said that President Johnson apparently had been grossly misinformed by his advisers on the legislation.

"Medicare would not be an insurance program of health care for the elderly, and workers would not contribute to a fund for their old age," Dr. Annis said.

"Medicare would be strictly a tax program, forcing wage earners to pay a substantial increase in their payroll taxes to finance hospitalization for everyone over 65, including those who are wealthy and millions of others who already are protected with hopsital insurance.

"The President has also been misinformed on the cost of such a program. Testimony of the Chief Actuary of the Social Security Administration before the Ways and Means Committee in November shows that every worker earning one hundred dollars or more a week would be forced to pay at least 23 percent more in payroll taxes to finance this inequitable program.

"Medicare is unnecessary. Private health insurance, now protecting more than 10 million elderly, is available to those who can pay their own way, and the Kerr-Mills Law, already enacted in more than 40 states, can help those who need help."

Other legislative proposals of interest to physicians include: An amendment to the Keogh law that would remove the present 50 percent limitation on the amount of in-

come tax deduction a self-employed person can claim on his annual retirement savings. It also removes the $2,500 or 10 per cent of income limitation on the amount of retirement savings an individual with employees could use for tax deduction purposes. This would be a tremendous boost for the Keogh program and for self-employed persons with retirement savings plans.

Rep. Eugene Keogh (D., N. Y.) and Sen. George Smathers (D., Fla.) are sponsoring the amendment.

The Internal Revenue Service recently issued a tentative ruling that was a setback to physicians and other professional men planning to band together into corporations for tax purposes. A proposed regulation stated that such professional organizations must have all of the characteristics of a business corporation in order to qualfiy for corporation tax treatment, which would be virtually impossible for a group of professional men.

The regulation would knock out the so-called Kintner regulations of 1960 under which IRS stated that associations of professional men would be classified for tax purposes as corporations provided certain corporate characteristics were followed and provided that state law authorized establishment of the groups as corporations.

The IRS proposal is not final and will be the subject of hearings at a later date. It appears certain to be the subject of court litigation, if made final.

—A civil defense bill that has passed the House and is before the Senate. It would provide a $190 million program of grants to hospitals and other non-profit institutions for building fall-out shelters. These shelters could be used as garages, storage areas, etc., in peacetime.

—An Administration proposal to require clearance and approval of new medical devices, which means anything from a new type of forceps to the most complicated radiation device. FDA would rule on the efficiency as well as the safety of such devices, as it does now on new drugs.

—Humane treatment of laboratory animals. Most of such bills would require research institutions to provide laboratory animal care conforming to certain fixed federal standards in order to qualify for federal grants.

—An amendment to the medical education law that would forgive part of the repayment of federal loans to students if the young physician settles in a physician-shortage area.

—The American Medical Profession and the U. S. Public Health Service have joined forces in opposing a Senate-passed bill that would deprive PHS of its authority over water pollution control activities. The bill, now before the House Public Works Committee, would set up a separate organization in the HEW Department to handle this function. The AMA contends that this would subordinate the health aspects of water pollution.

—Appropriations for the National Institutes. Last year Congress cut the NIH budget request by $12 million in approving $918 million for NIH. This was the first time in recent years Congress has failed to substantially increase the NIH budget request of the Administration. It indicated that Congress is going to take a closer look at all federal research projects, which total some $14 billion a year.

The AMA has pledged its aid to a Special House Committee investigating the Federal research effort. The AMA told the committee that medical research spending should not grow to the point where quality is overlooked in favor of quantity.

"Research is an investment in the future," Dr. F. J. L. Blasingame, Executive Vice-President of AMA, said in a letter to the committee. "Properly conducted and supported by prudent expenditures, medical research, providing for his physical and social well-being, is vital to the total health security of man. . . .

"Certainly, the effort of your Committee and the review being conducted should prove helpful to the nation. We would like to aid that effort in every way that we can."

President Johnson signed into law a bill authorizing $95 million over the next three years to help states and local agencies combat air pollution, including that from automotive exhausts and industries.

The new law revised the old air pollution control program and made it permanent. It expands the 1955 program that provided

Federal grants for cooperative research under the direction of the Secretary of Health, Education and Welfare. He was given broader authority for such research and directed to recommend remedial actions.

These remedial actions could include Federal suit for abatement of interstate air pollution. The Attorney General also could aid states in such intra-state actions if aid were asked by the governor and other state officials.

MEDICAL NEWS IN TENNESSEE

Twelfth Annual Medical Symposium

Nationally-known authorities on diseases of the heart and circulatory system were speakers at the 12th Annual Medical Symposium presented by the East Tennessee Heart Association in Knoxville on January 16th. The theme for the symposium was "Progress Reports in Cardiovascular Disease". Guest speakers included: Dr. Herbert A. Saaltzman, assistant professor of medicine and assistant director of the Hyperbaric Unit at Duke University Medical Center; Dr. Noble O. Fowler, associate professor of medicine at University of Cincinnati; Dr. Forest H. Adams, vice chairman of the Department of Pediatrics, UCLA and consultant there in cardiology; and Dr. John Adriani, director of the Department of Anesthesiology and Inhalation Therapy at Charity Hospital, New Orleans. More than 200 physicians from 40 East Tennessee counties attended the symposium.

Metropolitan Council for Community Services—Chattanooga

Dr. Dean W. Roberts, executive director of the National Commission on Community Health Services, was featured speaker at the annual meeting of the Metropolitan Council for Community Services in Chattanooga. His subject was "A Community Studies and Acts on Its Health Needs".

The annual meeting marked the completion of two years of existence for the Metropolitan Council for Community Services during which several major studies have been completed and action stimulated in its over-all fields of concern, health, welfare and recreation.

Memphis Medical Center Continues to Grow

The City of Memphis Hospital's new $5 million 12-story radiology building was dedicated February 2nd. Four floors of the Walter Chandler Clinical Services Center, and a badly needed new emergency room, will be ready for operation in March. Completion of the balance is scheduled over a six-year period. Other projects include: the $7 million William F. Bowld Hospital with seven floors and 148 private rooms; the $2 million James K. Dobbs Medical Research Building; a 10-story Baptist Hospital doctors office building; the $22 million, 14-story Kennedy Hospital; a $5 million, 350-bed wing of Methodist Hospital; and two eight-story wings of St. Joseph Hospital at a cost of $11 million.

Le Bonheur Children's Hospital plan to add 70 to 80 beds, a doctors office building, and a new parking lot for a cost of $2.5 million plus.

University of Tennessee College of Medicine

The first in a series of seven weekly seminars for attorneys on trauma began January 15th. Participants in the panel discussion and their subjects were: Dr. W. K. Hoffman—"Principles of Physiological Diagnosis", Dr. R. H. Walker—"Functions of the Laboratory", and Dr. J. T. Francisco —"Functions of the Autopsy". Dr. Francisco also gave a lecture on "Concepts and Principles of Trauma".

★

A continuing course for medical technologists, designed to offer the basic technics and theories in certain areas of laboratory medicine, was presented on January 24th. In addition to members of the staff of the University, two outstanding guest faculty members were selected for their knowledge and outstanding work in their respective fields. They were Dr. Morris A Gordon, Medical Mycologist, Division of Laboratories and Research, New

York State Department of Health, and Dr. Ernest H. Runyan, Director, Tuberculosis Research Laboratory, Veterans Administration Hospital, Salt Lake City, Utah.

★

Dr. Audrey N. Roberts, Assistant professor of preventive medicine, has received a five-year research career development award from the National Institutes of Health of the U. S. Public Health Service. The purpose of the program is to increase the number of career opportunities for scientists with superior potential in areas related to health.

★

Dr. G. H. Aivazian has been appointed chairman of the department of psychiatry. He succeeds Dr. T. S. Hill who resigned to become director of the Tennessee Brain Research Laboratory in the Tennessee Psychiatric Hospital and Institute.

★

Dr. James Pate, chairman of the section of thoracic surgery at the College of Medicine, has been elected president of the college faculty succeeding Dr. Robert Utterback, chairman of the division of neurology. Other new officers are Dr. Richard H. Walker, vice president, and Dr. Glen E. Horton, secretary. Named to the executive committee were Drs. Charles McCall, Henry Packer, Laurence Fitzgerald and William McCormick.

★

Dr. William M. Hale, professor of microbiology since 1953, has been named professor emeritus.

Vanderbilt University School of Medicine

A team of researchers, exploring the possible connection between the fertilization process and subsequent birth of defective offspring, was awarded a $48,469 grant by the National Foundation to continue its work. The project is headed by Dr. Robert Noyes, chairman of the department of obstetrics and gynecology.

★

Dr. Walter Nance has returned to join the faculty after two and a half years in the department of genetics at the University of Wisconsin Medical School. He will teach and carry on research in cytogenetics, as well as to participate in clinical work in his position as assistant professor of medicine.

★

Dr. Rudolph Light, former associate professor of surgery, has been named a Commander of the British Empire in recognition of his services to British education. He will be invested in ceremonies to be conducted at the British Embassy by the British ambassador, Sir David Ormsby Gore. The honorary title is one step below knighthood in the Order of the British Empire

From 1949 until 1958, Dr. Light was director of the rehabilitation service and director of surgical research at Vanderbilt. He obtained for the University the S. Rudolph Light Laboratory for Surgical Research, financed by and named for his father.

St. Jude Hospital—Memphis

Guest speakers for recent seminars at the Hospital have included Dr. Irwin R. Konigsberg, professor of embryology at the Carnegie Institution in Washington; Dr. Frantisek Sokol, a member of the staff of the Institute of Virology, Czechoslavak Academy of Sciences at Bratislava; and Dr. Amoz I. Chernoff, resident professor of hematology at the University of Tennessee Memorial Research Center in Knoxville.

★

Dr. Paulus Zee, a pediatrician with special training in biochemistry, has joined the staff of St. Jude Hospital and the University of Tennessee as assistant professor of pediatrics.

Meharry Medical College

Nearing completion—a part of $2 million worth of additions at the school and Hubbard Hospital—is a new intensive treatment psychiatric unit where a variety of specialists will combine into a broad-scale approach to mental disorders. The facility will have, besides its in-patient clinic and

out-patient services, a day-care center. When fully-staffed, its patients will have the services of psychiatrists, psychologists, neurologists, psychiatric nurses, and social and occupational therapists and other specialists.

★

Researchers trying to find why organs or tissues transplanted from one person to another meet overwhelming resistance have speculated this may be due to changes in ribonucleic acid. A group of Meharry Medical College researchers are joining the investigation in an effort to find whether this "transformation" occurs in the recipient's lymphoid tissue such as the spleen or the lymph nodes. The study will be conducted under a grant of more than $65,000 from the National Institutes of Health which will cover investigation over a period of three years.

Chattanooga Area Heart Association

The annual heart symposium was held on February 6th. Dr. Harry S. Anderson was chairman for the program and guest speakers included: Dr. James W. Woods, University of North Carolina School of Medicine, Chapel Hill; Dr. Richard Krause, Washington University Department of Preventive Medicine, St. Louis; and Dr. Benjamine Manchester, George Washington School of Medicine, Washington, D. C. Dr. Manchester was also the featured speaker at the banquet held at the Chattanooga Golf and Country Club for those attending the symposium.

Central State Hospital

Dr. John M. Wilson, former superintendent of the Greene Valley Hospital and School in Greeneville since 1960, has been appointed superintendent of Central State Hospital. He replaces Dr. E. Calvin Moore, who resigned as superintendent last summer.

PERSONAL NEWS

Dr. William K. Swan, Knoxville, spoke on "Open Heart Surgery" at a recent meeting of the Knoxville Democratic Women's Club.

Dr. Richard L. Whittaker, Knoxville, has been named director of medical education at St. Mary's Hospital. He succeeds **Dr. Mark P. Fecher** who is now devoting full time to private practice.

Dr. William Gardner Rhea, Jr., will join his father in the practice of medicine at Nobles Memorial Clinic in Paris, July 1st.

Dr. Harwell Murrey, Pulaski, has been elected Medical Advisor of the Giles County Heart Unit.

Dr. Thomas Frist and Dr. Laurence Grossman, Nashville, participated in a forum on the subject "How to Have a Heart Attack" before citizens of Williamson County on January 27th.

Dr. James A. Wallace, formerly acting superintendent, has been appointed superintendent of the Tennessee Psychiatric Hospital and Institute in Memphis.

Drs. George K. Henshall, Jr. and C. Windom Kimsey, announce the association of **Dr. Edmund B. Bratly** in the practice of radiology in Chattanooga.

Dr. Henry B. Turner, Memphis, has been appointed chief of staff of Baptist Hospital succeeding **Dr. Marcus Stewart.**

Dr. A. H. Tuttle, Memphis, has been elected to membership in the American Society of Hematology.

Dr. Douglas H. Sprunt, Memphis, was a participant on a special NBC program on the cigarette controversy on January 11th. The program on "Smoking and Health" was scheduled in connection with U.S. Surgeon General's recent report.

Dr. William H. Tucker is now associated with **Dr. Arden J. Butler** in the practice of medicine in Ripley.

Dr. Ralph L. Brickell, Jr., Tullahoma, is the new chief of staff of Coffee County Hospital succeeding **Dr. C. H. Webb** of Tullahoma. **Dr. John Shields** of Manchester was elected vice chief of staff, and **Dr. Dan Calhoun,** also of Manchester, was named secretary.

Dr. Arthur K. Husband, formerly of Crossville, has been named superintendent of the Greene Valley Hospital at Greeneville.

Drs. William F. Meachum, Robert Noyes and Robert Merrill, Nashville, were speakers at a recent March of Dimes meeting outlining the progress of research work being done in Middle Tennessee to correct and prevent birth defects.

Dr. Wallace B. Frierson, formerly of Shelbyville, has been named to head the medical branch of ARO, Inc., contract operator of the Arnold Engineering Development Center.

Dr. Edward T. Newell, Jr., president of the Chattanooga-Hamilton County Medical Society, addressed the Junior Chamber of Commerce at a luncheon on January 15th. His subject was the Sabin vaccination program.

Dr. Daniel Riddick is now associated with **Dr. R. B. Wilson** at Wilson Hospital in Huntingdon.

Dr. W. E. Gibbons, Rogersville, was elected chief of staff of Hawkins County Memorial Hospital. **Dr. Ralph Gambrel** was elected vice chief, and

Dr. W. H. Lyons was re-elected secretary-treasurer.

Dr. Robert L. Allen, Cleveland, has been named County Medical Examiner for Bradley County.

Dr. George W. Bounds, Jr., Nashville, spoke on "The Eye Bank and Eye Transplant" at a meeting of the Business and Professional Women's Club on January 14th.

Dr. Walter P. Griffey will join the staff of Nobles Hospital in Paris in July.

Dr. Orin L. Davidson, Memphis, was installed recently as president of the Memphis Obstetrical and Gynecological Society. He succeeds **Dr. Joseph C. Mobley**. Other officers are **Dr. Palmer Moss**, president-elect; **Dr. Earl Baker**, secretary, and **Dr. Gordon Rogers**, treasurer.

Dr. Eugene Wolcott has joined **Dr. J. C. Leonard** in Lewisburg in the practice of medicine. He is replacing **Dr. Lloyd Grimes** who has accepted a position in Mount Airy, North Carolina.

Dr. Daniel F. Fisher has been re-elected chief of staff at Memphis Eye, Ear, Nose and Throat Hospital. **Dr. Fred Wallace** was named vice-chief, and **Dr. Ralph S. Hamilton** was re-elected secretary.

Dr. George M. Katibah, Albuquerque, N.M., has assumed the duties of associate pathologist and director of medical Education at Baptist Hospital in Knoxville.

Dr. Robert H. Hackman, who has been associated with the Bel Aire Medical Center in Murfreesboro for the past year, has opened an office in Smyrna and is engaged in the general practice of medicine.

Dr. John H. Burkhart, Knoxville, has been named chief-elect of the staff at St. Mary's Hospital. **Dr. Harold L. Neuenschwander** has been installed as the new chief of staff and **Dr. Harry Ogden** was elected secretary.

Dr. George W. Holcomb, Jr., Nashville, announces limitation of his practice to surgery of infants, children and adolescents (birth through 18 years).

Dr. Elton King has opened his office for the practice of obstetrics and gynecology in Dyersburg.

Dr. John M. Wilson was honored at a luncheon by the Greene Valley Hospital and School. Dr. Wilson had accepted the appointment as superintendent of Central State Hospital in Nashville and assumed his new position on January 20th.

Dr. Sells Blevins was guest speaker at a recent meeting of the Jonesboro Kiwanis Club. His subject was "Big Things Done In Medicine in 1963."

Dr. John T. Mason, formerly of McMinnville, has moved to Nashville to begin a year of special training preparatory to entering the field of administrative medicine.

Dr. J. Lynwood Herrington, Jr., Nashville, spoke on surgical repair of hiatal hernia during a sectional meeting of the American College of Surgeons in Baltimore, January 27-29. Dr. Herrington was also the guest speaker at the Chattanooga Surgical Society Meeting on January 14th.

Dr. C. B. Brewer, Clarksville, has been named chief of staff at Memorial Hospital. **Dr. Sam Doanne, Jr.** was elected chief of medicine, **Dr. Tom Iglehart**, chief of surgery, **Dr. Jack Ross, Jr.**, chief of obstetrics and gynecology.

Dr. C. Harold Steffee, director of laboratories at Methodist Hospital, Memphis, has been awarded a grant of $18,419 from the Tobacco Industry Research Committee of New York to study the effect of cigarette smoke on lungs of rats.

Dr. G. Turner Howard, Knoxville, is Tennessee's representative of the U. S. Committee of the World Medical Association.

Dr. Sparkman H. Wyatt, Nashville, announces the opening of his office for the practice of psychiatry.

Dr. James W. Johnson, has joined the Burch Clinic, Nashville, in the practice of obstetrics and gynecology.

BOOK REVIEW

Atlas of Bone Tumors, by W. S. Gilmer, Jr., M.D.; G. B. Higley, Jr., M.D., and W. E. Kilgore, M.D. 161 pages, 311 figures. C. V. Mosby Company, St. Louis, 1963. Price $27.50.

This monograph on selected tumors of the skeletal system is well prepared and will be helpful to the beginner in arranging his initial concepts of pathology of bone tumors. The format is that of a short synopsis of the pertinent information regarding the tumor, x-rays of the pathologic changes in the bone and gross, color photographs of the specimen with photomicrographs of representative sections of the specific tumor.

Although the monograph does not give one information that is new, it is an excellent corollary of the tumors presented and in such a manner as to excite the reader to learn more about skeletal tumors.

ANNOUNCEMENTS

Calendar of Meetings, 1964

State

March —Postgraduate Courses sponsored by the Department of Continuing Education of the University of Tennessee Medical Units: March 9-13—"Radiology"; March 19-21—"Surgery of the Hand"; March 25-27—"Obstetrics and Gynecology."

April 12-15—Tennessee Medical Association Annual Meeting, Peabody Hotel, Memphis

Regional

March 2-5 — New Orleans Graduate Medical Assembly, Roosevelt Hotel, New Orleans

March 16-19—American College of Surgeons, Roosevelt & Jung Hotels, Louisiana State University and Tulane University, New Orleans

March 19-21— Annual Meeting of Georgia Society of Ophthalmology and Otolaryngology, Callaway Gardens, Pine Mountain, Ga.

March 21-28—Southeastern Surgical Congress, aboard the S. S. Hanseatic. Cruise will begin March 21, sailing from Ft. Lauderdale, Fla. and returning on March 28.

April 1-3 —American Surgical Association, Homestead, Hot Springs, Va.

April 13-16 —American Radium Society, Greenbrier Hotel, White Sulphur Springs, West Virginia

April 15-18 —West Virginia Academy of Ophthalmology and Otolaryngology, Greenbrier Hotel, White Sulphur Springs, West Virginia

April 23-25 —Medical Association of Alabama Annual Meeting, Montgomery

April 27-28 —Society of Head & Neck Surgeons, Peabody Hotel, Memphis

May 2-6 —Medical Society of the State of North Carolina Annual Meeting, Greensboro

May 3-6 — Medical Association of Georgia Annual Session, Macon

May 11-14 —Mississippi State Medical Association Annual Meeting, Jackson

National

March 15-19—International Anesthesia Research Society, Flamingo Hotel, Las Vegas

March 25 —Symposium on Kidney Disease, Sherton-Chicago Hotel, Chicago

April 3-5 —American Society of Internal Medicine, Atlantic City, New Jersey

April 3-5 —American Association of Pathologists and Bacteriologists, Drake Hotel, Chicago

April 6-10 —American College of Physicians, Chalfonte-Haddon Hall, Atlantic City, N. J.

April 7-9 —American Laryngological, Rhinological and Otological Society, St. Francis Hotel, San Francisco

April 11-16 —American Academy of General Practice, Convention Hall, Atlantic City, N. J.

April 22-25 —Eighth Postgraduate Course on Fractures, American College of Surgeons, Chicago

April 27-29 —American Association for Thoracic Surgery, Queen Elizabeth Hotel, Montreal

Medical Journalism Awards

To recognize journalism that contributes to a better public understanding of medicine and health in the United States, the American Medical Association's Awards Committee will present $1,000 and an appropriately inscribed plaque to winners in five categories of competition—newspaper, magazines, editorial, radio, and television. Deadline for receipt of all entries is February 1, 1965, although entries may be submitted at any time prior to that date. Entries must have been published or broadcast during the calendar year 1964 and will be judged on a basis of accuracy, significance, quality, public interest and impact.

All entries and requests for information should be sent to the 1964 Medical Journalism Awards Committee, American Medical Association, 535 North Dearborn Street, Chicago, Illinois 60610.

Meeting of Section of Ophthalmology of SMA

The Section of Ophthalmology of the Southern Medical Association is accepting papers up to May 15, for presentation at its meeting Nov. 16-19. For further information, please contact Dr. George S. Ellis, Secretary, 812 Maison Blanche Building, New Orleans, Louisiana.

American College of Physicians

The American College of Physicians will hold its 45th Annual Session in Atlantic City, New Jersey, April 6-10. The scientific portions of the meeting will cover topics ranging from gastrointestinal disorders and the diagnosis and treatment of heart diseases to reports on family allergies, infections, lung, liver and kidney diseases, virus problems and conditions involving metabolic function and the endocrine glands. Highlights of the scientific program include color television presentations on a closed circuit, sessions on basic medical sciences and clinical investigation, panel discussions and hospital clinic sessions.

For further information, write to Dr. Edward C. Rosenow, Jr., Executive Director, 4200 Pine Street, Philadelphia, Pa. 19104

Southeastern Surgical Congress

The 1964 Southeastern Surgical Congress will be held on the S. S. Hanseatic. The ship will sail from Port Everglades (Fort Lauderdale), Florida on March 21 returning to the same port on March 28. Stops included will be St. Thomas, San Juan and Nassau. For further information write to the Secretary-Director, Dr. A. H. Letton, 340 Boulevard, N.E., Atlanta 12, Ga.

Symposium on Pediatrics

A symposium on pediatrics entitled "The Sick Child in General Practice" will be held in the auditorium of the Mound Park Hospital and the

clinics of the American Legion Hospital for Crippled Children in St. Petersburg, Florida, April 9-11, 1964. Limited to 35 physicians. Fee $40.00. 18 Credit Hours Category I allowed. Address PEDIATRICS, Mound Hospital Foundation, Inc., St. Petersburg, Florida.

The Tennessee Heart Association, Inc. Research Fellowships and Grants—1964-65

RESEARCH FELLOWSHIPS (POSTDOCTORAL) are awarded primarily for the purpose of training for investigation. Fellows will be known as Research Fellows of the Tennessee Heart Association. A basic stipend for a Research Fellow is $5,000.00 per annum. Applications must be received by May 1 or November 1. Notice of award will generally reach the applicant within two months following the deadline. Fellowships may begin at any time after January 1 or July 1.

GRANTS-IN-AID are available to non-profit institutions in the area served by the Tennessee Heart Association, Inc., which possess the requisite basic facilities for research at the level for which support is asked. Grants are made with a stipulation that they are to be used by a particular individual (or individuals) in support of a specified program under his direction. Applications must be received by November 1 for grants to start on or after January 1, and by May 1 for grants to start on or after July 1.

Application forms are available for this support from the Tennessee Heart Association, 219 Bennie Dillon Building, Nashville, Tennessee, 37203.

Vanderbilt University School of Medicine

The Division of Clinical Physiology and the Department of Medicine of Vanderbilt University School of Medicine will conduct a two-day course in "Cardiovascular Disease—Physiological Principles of Cardiac Treatment" on Tuesday and Wednesday, March 10 and 11. The theme of this course relates to physiological principles guiding cardiac therapy in some selected conditions. The topics chosen are those in which significant advances have been made within recent time. Participants will be given the opportunity to witness such technical procedures as cardio-pulmonary by-pass surgery, left heart catheterization and any other activities in the Division of Clinical Physiology.

———————

The Department of Obstetrics and Gynecology will present a program on "Urologic Problems in Gynecology" on Thursday, March 26. Dr. Richard Mattingly, Professor and Chairman of the Department of Gynecology at Marquette University will be the guest speaker. The program will consist of lectures and panel discussions of various interesting and common urologic problems faced in the field of obstetrics and gynecology.

Both of these courses are acceptable for credit by the American Academy of General Practice. For further information address the Division of Continuing Education, Vanderbilt University School of Medicine.

Circle
These Dates
APRIL
12-15

Tennessee Medical Association

1964 ANNUAL MEETING HIGHLIGHTS

MEMPHIS, TENNESSEE

MAKE A DATE—APRIL 12-15, 1964—for the TENNESSEE MEDICAL ASSOCIATION'S big meeting of the year. Three days of Scientific Meetings—Lectures by outstanding speakers, Symposia, Conferences. This is a meeting in which every Tennessee Physician will find features to his liking.

President's Banquet

Monday, April 13 • Peabody Hotel

House of Delegates

Sunday, April 12 • Tuesday, April 14

Registration Daily

8:00 a.m. to 5:00 p.m. . . . No Registration Fee



Headquarters: Peabody Hotel

Here are Features:

- Three Days of Scientific Meetings
- Meetings of Seventeen Specialty Societies
- Fun and Entertainment
- Technical and Scientific Exhibits
- Guest Speakers
- The President's Banquet at the Peabody
- Meeting of the Woman's Auxiliary—Arts and Crafts Exhibit
- Banquets and Business Sessions
- Credits for Members of the American Academy of General Practice

Write to Reservations Manager, Peabody Hotel, Memphis 1, Tennessee.

Registration Desk Will Be Located in the Lobby of the Peabody Hotel

PLACEMENT SERVICE

The Placement Service of the Tennessee Medical Association is designed to assist doctors and communities in position and practice opportunities. Further information is available from the Public Service Office, 112 Louise Avenue, Nashville—telephone, 291-4584.

Locations Wanted

UROLOGIST, 30 years of age, graduate of the Tulane University School of Medicine, would like clinical or associate practice in Middle Tennessee area of 2,000 to 65,000. Married. Protestant. Available upon completion of fourth year of residency, July 1964. LW-486

◆

GENERAL SURGEON, Board eligible, 30 years of age, graduate of the University of Tennessee College of Medicine, would like assistant, associate, or solo practice in West Tennessee city of any size. Married. Protestant. Tennessee license. Available upon completion of fifth year of residency, July 1964. LW-497

◆

INTERNIST, 32 years of age, now in military service, graduate of the University of Louisiana College of Medicine would like to establish associate, clinical, or hospital practice in any large city in Tennessee. Single. Catholic. Available July 1964. LW-499

◆

OBSTETRICIAN-GYNECOLOGIST, 38 years of age, graduate of the University of Arkansas School of Medicine, would like assistant, associate, or clinical practice in Middle or West Tennessee city of 50,000 and over. Married. Protestant. Available July 1965, after completing third year residency. LW-501

◆

OBSTETRICIAN-GYNECOLOGIST, 31 years of age, graduate of Duke University School of Medicine, now in residency, would like associate, clinical or solo practice in East Tennessee city of 20,000 or over. Married. Protestant. Available July 1964. LW-502

◆

INTERNIST, 30 years of age, now in residency, graduate of the Yale School of Medicine, would like assistant, or associate practice in East Tennessee city of 50,000 to 200,000 population. Married. Protestant. Available July 1964. LW-504

◆

INTERNIST, 28 years of age, graduate of the George Washington School of Medicine, would like assistant, associate or clinical practice in East or Middle Tennessee city of 15,000 to 400,000. Native Tennessean. Married. Protestant. Available July 1965. LW-523

◆

OBSTETRICIAN-GYNECOLOGIST, 34 years of age, graduate of the University of Tennessee College of Medicine, now in residency, would like associate or group practice in any city in Tennessee of 15,000 to 400,000 population. Married. Protestant. Tennessee license. Available July 1964. LW-524

◆

SURGEON, general and thoracic, 33 years of age, graduate of the University of Tennessee College of Medicine, now in residency, would like associate, institutional or solo practice in East or Middle Tennessee city of 20,000 plus. Married. Catholic. Available July 1964. LW-525

GENERAL PRACTITIONER, 28 years of age, graduate of the University of Cincinnati College of Medicine, now in military service, would like associate practice in East Tennessee city of 5,000 plus. Married. Protestant. Available August 1964. LW-526

Physicians Wanted

Associate needed by physician in East Tennessee town of 6,000 for general practice. Age 25-35, with one year internship. New, private office. Examining rooms, and equipment available, and hospital located in community. PW-134

◆

General practitioner needed for solo practice in small South Tennessee community of over 500. No other physician in area. Office space and some equipment available. PW-147

◆

Associate general practitioner needed by physician in East Tennessee city of over 2,000, share office and equipment. Good housing available. Hospital near. PW-169

◆

General practitioner needed for solo practice in small North Tennessee town. No other physician in county. Approved for Sears Roebuck Foundation assistance. Support of business and civic leaders assured. PW-177

◆

General practitioner needed as replacement in Middle Tennessee town of over 12,000. Clinical practice. Surgical experience preferred but not required. Housing and office space, with some equipment, available. PW-188

◆

Small hospital in Middle Tennessee town of 2,000 in need of physician to operate it. No other physician in area. General practitioner, Ob-Gyn, Internist, or Surgeon desired. Hospital fully equipped. Near large Air Force Base and large metropolitan area. PW-198

◆

Physician in Middle Tennessee town of over 10,000 in need of an associate or assistant for large clinic. General practitioner or general surgeon desired. Requirements: high morals; abstinence of alcoholic beverages; must have residency training. PW-200

◆

General practitioner needed for temporary practice of six months to one year, in small Middle Tennessee town of 3,000, to fill vacancy caused by physician leaving for further residency training. Salary open; living quarters with meals if desired, or other suitable arrangements. Office space and equipment furnished. Physician must do hospital practice. PW-202

◆

Internist needed as an assistant in West Tennessee city of 15,000. Well established and equipped office. Age 25-35. Hospital practice required. Area is an agricultural and industrial one. Good opportunity. PW-203

◆

FOR LEASE: 1,000 square feet in an uptown office building of a Middle Tennessee town of 12,500. Fully equipped with x-ray and laboratory; parking area connected; modern, centrally air-conditioned and heated. Physician going into institutional practice. PW-205

TENNESSEE MEDICAL ASSOCIATION 1963-1964 STANDING COMMITTEES

Committee on Scientific Work and Postgraduate Education—R. H. Kampmeier, Chairman, Nashville; W. Powell Hutcherson, Chattanooga; Robert P. McBurney, Memphis; Eugene J. Spiotta, Memphis.
(Specialty Representatives To Be Named)

Committee on Hospitals—Robert M. Miles, Memphis, Chairman (1965); James A. Burdette, Knoxville (1966); C. D. Hawkes, Memphis (1965); Harry T. Moore, Jr., Nashville (1965); Chester K. Jones, Jackson (1964) John W. Adams, Jr., Chattanooga (1964); Thomas K. Young, Jr., Columbia (1964) George L. Smith, Winchester (1965) Granville Hudson, Nashville (1966); Brian T. Shorney, Nashville (1966).

Legislative and Public Policy Committee—Tom E. Nesbitt, Chairman, Nashville (1964); H. L. Monroe, Erwin (1965); Charles C. Smeltzer, Knoxville (1966); George K. Henshall, Chattanooga (1964); Sam H. Hay, Murfreesboro (1965); K. M. Kressenberg, Pulaski (1966); John G. Riddler, Jackson (1965); Byron O. Garner, Union City (1966); W. David Dunavant, Memphis (1964). **(Appointed for One-year Terms)**—Alvin J. Ingram, Memphis (1964); Perry J. Williamson, Knoxville (1964); Robert E. Baldwin, Chattanooga (1964); Warren B, Henry, Chattanooga (1964); Chas. C. Trabue, IV, Nashville (1964); James T. Callis, Crossville (1964); Thomas F. Frist, Nashville (1964); E. T. Brading, Johnson City (1964); O. M. McCallum, Henderson (1964); A. Roy Tyrer, Memphis (1964); Clifton Greer, Nashville (1964); Charles A. Trahern, Clarksville (1964); R. H. Kampmeier, Ex-officio, Nashville (1964).

Liaison Committee to the Public Health Department—Wm. A. Hensley, Chairman, Cookeville (1966); C. D. Hawkes, Memphis (1965); William I. Proffitt, Cleveland (1967); Lamb B. Myhr, Jackson (1967); Thomas S. Weaver, Nashville (1964).

Committee on Insurance—Wm. T. Satterfield, Chairman, Memphis (1965); Augustus McCravey, Chattanooga (1964); Garth Fort, Nashville (1966); George L. Inge, Knoxville (1964); B. F. Byrd, Sr., Nashville, Consultant.

Committee on Cancer—B. F. Byrd, Jr., Chairman, Nashville (1965); Edwin W. Cocke, Jr., Memphis (1965); Ralph H. Monger, Knoxville (1964); Hollis E. Johnson, Nashville (1964); S. S. Marchbanks, Chattanooga (1965); G. Sydney McClellan, Nashville (1965); John M. Higgason, Chattanooga (1965); Homer P. Williams, Bristol (1965); Cyrus C. Erickson, Memphis (1965).

Committee on Memoirs—Henry L. Douglass, Chairman, Nashville (1965); A. M. Patterson, Chattanooga (1966); S. Fred Strain, Sr., Memphis (1965).

Committee on Health Insurance—B. K. Hibbett, III, Chairman, Nashville; Joseph W. Johnson, Jr., Chattanooga; Robert N. Sadler, Nashville; E. L. Caudill, Jr., Elizabethton; James J. Callaway, Nashville; Wm. A. Garrott, Cleveland; Greer Ricketson, Nashville; Harry T. Moore, Jr., Nashville; William G. Crook, Jackson; J. Cash King, Memphis; Thomas F. Parrish, Nashville; W. T. Satterfield, Memphis; Howard A. Boone, Memphis; Robert N. Buchanan, Jr.,; Nashville; Elgin P. Kintner, Maryville; H. K. Turley, Memphis; A. Roy Tyrer, Memphis; Gilbert A. Rannick, Johnson City; John G. Riddler, Jackson; Charles R. Zirkle, Knoxville; Mr. Clyde York, Columbia; Mr. Charles L. Cornelius, Sr., Nashville; R. H. Kampmeier, Ex-officio, Nashville.
Executive Sub-Committee—B. K. Hibbett, III, Chairman, Nashville; Robert N. Sadler, Nashville; James J. Callaway, Nashville; Thomas F. Parrish, Nashville; Mr. Charles L. Cornelius, Sr., Nashville; R. H. Kampmeier, Ex-officio, Nashville.

Advisory Committee to the State Department of Public Welfare—Aubrey Harwell, Chairman, Nashville (1965); Carl A. Hartung, Chattanooga (1967); F. T. Billings, Jr., Nashville (1964); Harold J. Starr, Chattanooga (1966); Joseph J. Baker, Nashville (1966).

Communications and Public Service Committee—R. A. Calandruccio, Chairman, Memphis (1964); Addison B. Scoville, Jr., Nashville (1964); Malcolm Campbell, Johnson City (1965); Wm. A. Garrott, Cleveland (1966); Wm. K. Owen, Pulaski (1964); Blair D. Erb, Jackson (1965); Roy L. McDonald, Oneida (1964); Charles L. Clarke, Memphis (1966); Morse Kochtitzky, Nashville (1966); Carson Taylor, Lawrenceburg (1966); R. H. Kampmeier, Ex-officio (1964).
Members State-at-Large—Walter Benedict, Knoxville (1965); J. Kelley Avery, Union City (1966); Augustus McCravey, Chattanooga (1964); Thomas F. Frist, Nashville (1964); Geo. D. Dodson, Jackson (1966); Herman J. Kaplan, Nashville (1966).
Executive Sub-Committee—R. A. Calandruccio, Chairman, Memphis (1964); Addison B. Scoville, Jr., Nashville (1964); R. H. Kampmeier, Ex-officio (1964); Thomas F. Frist, Nashville (1964); Morse Kochtitzky, Nashville (1966); Herman J. Kaplan, Nashville (1966).

Grievance Committee—Harmon L. Monroe, Chairman, Erwin (1964); W. O. Vaughan, Nashville (1965); William J. Sheridan, Chattanooga (1966).

Rural Health Committee—Julian C. Lentz, Jr., Chairman, Maryville (1965); Wm. N. Cook, Columbia (1966); Robert H. Elder, Cedar Hill (1966); John B. Dorian, Memphis (1966); Eugene M. Ryan, South Pittsburg (1966); Mr. Vernon Darter, Knoxville; Mr. Kenneth Cherry, Columbia.

Committee on Tennessee Medical Foundation—Harrison J. Shull, Chairman, Nashville (1966); Thomas G. Dorrity, Memphis (1966); B. M. Overholt, Knoxville (1966); Julian K. Welch, Jr., Brownsville (1964); Daugh W. Smith, Nashville (1964); Ralph H. Monger, Knoxville (1964); Robert N. Buchanan, Jr., Nashville (1965); J. Paul Baird, Dyersburg (1965); John E. Kesterson, Knoxville (1965).

SPECIAL COMMITTEES

Consultative Committee on Administration of Voluntary Prepaid Medical Care Plans—Carl N. Gessler, Chairman, Nashville; R. B. Wood, Knoxville; H. P. Clemmer, Milan; William R. Bishop, Chattanooga; J. J. Range, Johnson City; George L. Smith, Winchester; J. Palmer Moss, Memphis; Garth E. Fort, Nashville; Baker Hubbard, Jackson; Howard A. Boone, Memphis.

Committee on Disaster Planning—George R. Livermore, Jr., Memphis, Chairman; Harmon L. Monroe, Erwin; Fred D. Ownby, Nashville; Bruce R. McCampbell, Knoxville; Charles W. Reavis, Chattanooga; Nat Winston, Chattanooga; Henry Packer, Memphis; Wm. F. Gallivan, Knoxville; John Beveridge, Nashville; Billy N. Golden, Kingsport.

Committee on Occupational Health—George E. Duncan, Chairman, Nashville; Moore J. Smith, Chattanooga; Peter J. Flippen, Tullahoma; Louis G. Britt, Memphis; H. L. Monroe, Erwin; Dudley G. Lockwood, Jr., Memphis; Alfred N. Costner, Johnson City.

Liaison Committee to the United Mine Workers of America—John H. Saffold, Chairman, Knoxville; Cecil E. Newell, Chattanooga; B. M. Overholt, Knoxville; Charles P. Wofford, Johnson City.

Advisory Committee to the Woman's Auxiliary—Roland H. Myers, Chairman, Memphis; Robert L. Akin, Knoxville; Fred E. Cowden, Nashville; E. E. Edwards, McKenzie.

Committee on Blood Banks—Merlin L. Trumbull, Chairman, Memphis; L. W. Diggs, Memphis; John W. Adams, Jr., Chattanooga; David K. Gotwald, Nashville; R. J. Leffler, Knoxville; Thomas P. Potter, Johnson City.

Committee on Governmental Medical Services—E. G. Kelly, Chairman, Memphis; J. Paul Baird, Dyersburg; Thurman Shipley, Cookeville; Cleo M. Miller, Nashville; Charles C. Smeltzer, Knoxville; George W. Holcomb, Jr., Nashville; Thomas L. Waring, Memphis; C. Kenneth Slade, Johnson City; Charles N. Hickman, Bells.
Committee on Mental Health—Frank H. Luton, Chairman, Nashville; Joseph W. Johnson, Jr., Co-Chairman, Chattanooga; E. L. Caudill, Jr., Elizabethton; Robert M. Foote, Nashville; Hollis C. Miles, Chattanooga; Joseph J. Baker, Nashville; Dan Sanders, Nashville; Richard F. Kelsey, Memphis; Carl C. Gardner, Jr., Columbia; John D. Griffith, Clarksville; O. S. Luton, Erin; P. J. Sparer, Memphis; Clifton E. Irwin, Knoxville; Robert G. Jordan, Memphis; Robert B. Hagood, Chattanooga.

Committee on Health Project Contest—Lawrence L. Cohen, Chairman, Memphis; William N. Dawson, Maryville; George K. Henshall, Chattanooga; Mrs. W. E. Van Order, Chattanooga; Mrs. James K. McQuire, Memphis; Mrs. James A. McGuire, Memphis.

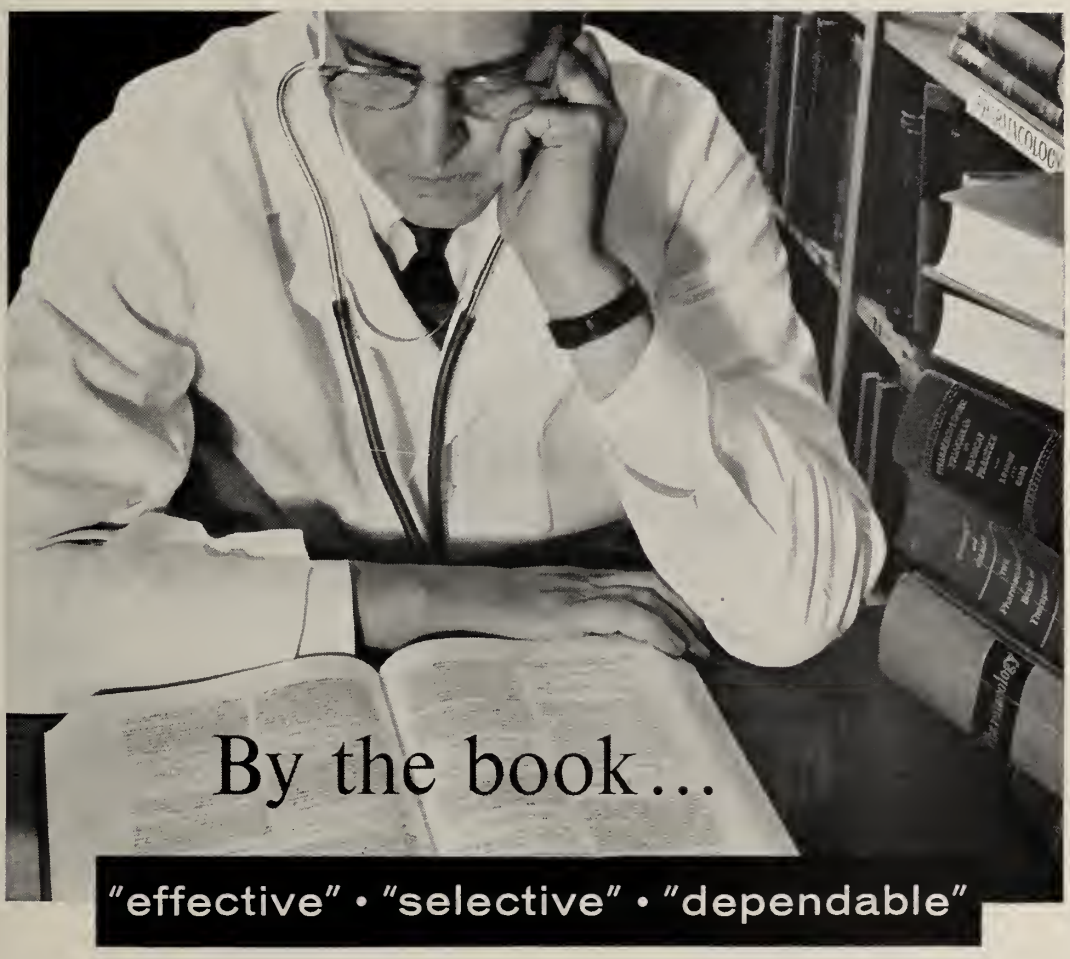
Committee on Sight Conservation—Fred Rowe, Jr., Chairman, Nashville; David H. Turner, Chattanooga; Reese W. Patterson, Jr., Knoxville; William H. Roberts, Humboldt; James W. Wilkes, Jr., Columbia; Chas. O. Parker, Johnson City; Howard R. Kennedy, Clarksville; G. H. Berryhill, Jackson; William A. Garrott, Cleveland; Roland H. Myers, Memphis.

Tennessee Committee for the American Medical Education and Research Foundation—David S. Carroll, Chairman, Memphis; B. F. Byrd, Jr., Nashville; D. T. Rolfe, Nashville.

Interprofessional Liaison Committee—Robert M. Ruch, Chairman, Memphis; Fred P. Sage, Memphis; Robert J. Allen, Elizabethton; William H. Edwards, Nashville; W. Houston Price, Chattanooga.

Committee on Youth and Education—John H. Burkhart, Chairman, Knoxville; Robert G. Brashear, Knoxville; Robert M. Foote, Nashville; Dan Sanders, Nashville; Minnie R. Vance, Chattanooga; Ben D. Hall, Johnson City; Lawrence L. Cohen, Memphis; W. M. Phillips, Trenton; J. Kelley Avery, Union City.

Committee on Medicine and Religion—H. Dewey Peters, Chairman, Knoxville; T. G. Pennington, Nashville; Gilbert J. Levy, Memphis; J. Malcolm Aste, Memphis; Ira L. Arnold, Chattanooga.



PRO-BANTHĪNE®

BRAND OF propantheline bromide

For Ten Years... the Standard Anticholinergic

Many studies by many investigators over many years have established Pro-Banthīne (propantheline bromide) as the standard anticholinergic in the management of peptic ulcer and other gastrointestinal disorders.

It Is Effective—Hundreds of comparative laboratory and clinical trials and innumerable gratified patients have made Pro-Banthīne (propantheline bromide) the most widely-prescribed medication in its class.

It Is Selective—Its major effect is on the gastrointestinal and urogenital tracts. Secondary activity when noticeable seldom passes the point of temporary annoyance.

It Is Dependable—Moderate doses reduce gastric secretion and acidity and diminish gastrointestinal hypermotility. The usual dosage may be safely doubled or tripled to suppress symptoms in patients with severe or refractory conditions.

These qualities have won such wide recognition in standard texts on pharmacology and therapeutics that to prescribe Pro-Banthīne (propantheline bromide) is truly to prescribe "by the book."

The usual adult dosage is one tablet of 15 mg. with meals and two at bedtime.

Side Effects And Cautions—Urinary hesitancy, xerostomia, mydriasis and, theoretically, a curare-like action may occur with Pro-Banthīne (propantheline bromide). It is contraindicated in patients with glaucoma or severe cardiac disease.

Pro-Banthīne (propantheline bromide) is supplied as tablets of 15 mg. and, for parenteral use, as serum-type ampuls of 30 mg.

G. D. SEARLE & CO.
CHICAGO, ILLINOIS 60680
Research in the Service of Medicine

REFER EYE PATIENTS
TO AN
EYE PHYSICIAN

By so doing, you will be assured of a complete diagnosis of your patients' eyes.

Guild Opticians complete the cycle for Professional Service.

GUILD OF PRESCRIPTION OPTICIANS OF AMERICA

BE SAFE—BE SURE

SEE

YOUR GUILD OPTICIAN

FOR

THE BEST SERVICE

EYE PHYSICIANS: Please Note—

Your prescriptions for glasses are "SAFE" when referred to a Guild Optician. Bound by the code of Ethics to uphold the highest standards in optical service.

APPALACHIAN HALL
Established 1916

Asheville North Carolina



An Institution for the diagnosis and treatment of Psychiatric and Neurological illnesses, rest, convalescence, drug and alcohol habituation.
Insulin Coma, Electroshock and Psychotherapy are employed. The Institution is equipped with complete laboratory facilities including electroencephalography and X-ray.
Appalachian Hall is located in Asheville, North Carolina, a resort town, which justly claims an all around climate for health and comfort. There are ample facilities for classification of patients, rooms single or en suite.

WM. RAY GRIFFIN, JR., M.D. MARK A. GRIFFIN, SR., M.D.
ROBERT A. GRIFFIN, M.D. MARK A. GRIFFIN, JR., M.D.

For rates and further information write
Appalachian Hall, Asheville, N. C.

Tennessee Medical Association's

Exclusively Approved

GROUP DISABILITY INCOME PROGRAM

Administered By

Smith, Reed, Thompson & Ellis Co.

1322 Nashville Trust Building
NASHVILLE 3, TENNESSEE
Phone 255-7625

WILLIAM H. ELLIS, C. L. U. MGR.
THOMAS G. HENRY
CALVIN K. WESSMAN

ASSOCIATES

Alden H. Smith, C. L. U.

Arthur D. Reed, C. L. U.

Joe Thompson, Jr., C. L. U.

Alden H. Smith, Jr., C. L. U.

E. Dan Smith, II

Underwritten By

Commercial Insurance Company

Newark, New Jersey



Out-Patient Clinic and Offices

HILL CREST SANITARIUM

Established in 1925

FOR NERVOUS AND MENTAL DISEASES
AND ADDICTION PROBLEMS

James A. Becton, M.D. James K. Ward, M.D.

P. O. Box 2896, Woodlawn Station, Birmingham 6, Ala. Phones WOrth 1-1151

Reprint Price Schedule

THE JOURNAL OF TENNESSEE MEDICAL ASSOCIATION

	100	200	300	400	500	600	700	800	900	1000	Add'l 1000
2 pages	12.80	14.15	15.60	17.30	17.65	18.00	18.55	19.50	20.70	21.85	12.00
4 pages	18.80	23.00	25.60	28.50	29.60	30.25	31.20	33.55	35.65	37.80	22.60
8 pages	36.80	41.60	46.15	51.00	52.30	53.00	54.45	57.85	61.50	64.90	35.00
12 pages	48.10	53.40	58.60	63.75	64.70	65.15	66.60	70.80	75.00	79.00	41.60
Envelopes 8¼x11¼	13.30	16.00	18.50	21.30	22.50	24.00	26.40	28.80	31.20	33.60	26.40

Reprints of articles in THE JOURNAL OF TENNESSEE MEDICAL ASSOCIATION are available at the following prices. Orders should be placed within 30 days following publication of the journal in which the article appears.

The above prices are for reprints supplied in the page size of THE JOURNAL OF TENNESSEE MEDICAL ASSOCIATION. If smaller or larger sizes are required, special prices must be obtained. Address

McQUIDDY PRINTING COMPANY **NASHVILLE, TENNESSEE**



Whether you're a teacher correcting exams. A student cramming for them. A housewife cleaning up after the kids. Or a businessman working late at night. Whoever you are, things go better when you pause and refresh with ice-cold Coca-Cola.



A SURGICAL INSTRUMENT OIL

Scientifically Developed for the

MEDICAL PROFESSION

Apply as indicated; a few drops especially in locks and serrations of instruments, or other delicate mechanisms. Leave a thin film over the entire instrument to prevent rust in disuse or storage. This highly refined clear instrument oil will not clog, gum or turn rancid. Non-corrosive.

4-oz. can 75c
Pt. bottle with dispensing can $2.50
Qt. bottle with dispensing can $4.00
Plus post.

White Surgical Supply Co.

SURGICAL SUPPLIES & ACCESSORIES

515 West Church Ave. Knoxville 7, Tennessee

Telephone 3-1186

PATRONIZE

OUR

ADVERTISERS

ACCEPTED AMERICAN MEDICAL ASSN

HOMOGENIZED
VITAMIN D MILK
PRODUCES SOFT CURD
(400 U.S.P. Units Vitamin D
Per Quart)

"A" Grade Sealtest MILK Phone AL 5-6451

Fortified Fat Free Milk
(2000 Units Vitamin A—400 Units Vitamin D)
NASHVILLE PURE MILK CO.



PHYSICIANS MUTUAL INSURANCE COMPANY
(FORMERLY PHYSICIANS CASUALTY ASSOCIATION AND PHYSICIANS HEALTH ASSOCIATION)
115 SOUTH 42ND STREET OMAHA 31, NEBRASKA

Something "New"

For

Doctors

Protect Your Most Valuable Asset

"Your Time"

Our New Sickness and Accident Protection Policy
Pays the Amount You Select up to $500.00 per Month
For Loss of Time Caused by Accident or Sickness

Insuring Physicians & Dentists for 60 years.

PHYSICIANS MUTUAL INSURANCE COMPANY

COUPON

Physicians Mutual Insurance Co.
115 So. 42nd St. Omaha 31, Nebraska
"Offering Protection to Physicians and Dentists
Since 1902"

Name_____ Age_____

Address_____ City_____



YOU:

HISTORY: 20 years of study, plus internship/residency. Substantial investment in professional location, equipment. **SIGNS and SYMPTOMS:** Reports that large home, growing family and minimal professional standard of living are a concern. Still ahead—college costs, retirement, natural estate ambitions. **PROGNOSIS:** Needs 15-20 peak years of income to pay off education, home; rear family; retire. All this while battling tough taxes, and without the benefit of social security or company paid life and disability insurance, pension plan. **TREATMENT:** Learn about Mutual Benefit Life's "Seven Significant Benefits". Talk with a M.B.L. representative. See how a built-for-you plan solves specific problems through unique disability clauses, unusually high cash and loan values, liberal survivor income options—and more. Write on your own professional letterhead for exclusive report covering a full range of typical insurance requirements for physicians. Just ask for a copy of *Consultant's Report.*

Those who plan ahead get ahead **MUTUAL BENEFIT LIFE** INSURANCE COMPANY, NEWARK, NEW JERSEY

CARRIER OF YOUR TENNESSEE MEDICAL ASSOCIATION GROUP LIFE INSURANCE PLAN

EDWARD C. DUNN
1104 Sudekum Bldg.
Nashville, Tenn.

SETH W. SIZER
1211 James Bldg.
Chattanooga, Tenn.

THERON M. LEMLY
1309 Poplar Ave.
Memphis, Tenn.

Professional Liability Insurance

(MALPRACTICE)

Policy and Rates Approved

by the

TENNESSEE MEDICAL ASSOCIATION



FARRINGER & CO.
Phone 524-7335
KNOXVILLE, TENNESSEE

FAW & SHERROD, INC.
JOHNSON CITY, TENNESSEE

INGLE-KNOX INSURANCE AGENCY
CHATTANOOGA, TENNESSEE

LIPSCOMB & PITTS COMPANY
MEMPHIS, TENNESSEE

Standard Coverage That

SAVES YOU 36%

NO. X-RAY THERAPY

Limits	Physicians	Surgeons
5/15	$ 44.80	$107.20
50/150	84.67	202.61
100/300	92.29	220.83
200/300	96.32	230.48
300/600	112.80	253.20
500/1 Million	132.83	278.85
1 Million/1 Million	139.55	294.93

X-RAY—RADIUM OR SHOCK THERAPY

5/15	89.60	152.00
50/150	169.34	287.28
100/300	184.58	313.12
200/300	192.64	326.80
300/600	213.60	354.00
500/1 Million	237.66	383.68
1 Million/1 Million	251.10	406.48

1. Partnership liability, increase premium for each partner by 20%
2. Anesthesiologists take Physicians rates.
3. Premises Liability (bodily injury and property damage) Minimum premium $12.40
4. Other limits will be quoted on request.

Your policy backed by
Assets over $40,000,000

Shelby Mutual Insurance Co.
of Shelby, Ohio

*20% off on Hospital—Professional Liability
*For Information on Hospital—Professional Liability and other coverages, please contact one of the agents listed.

SAINT ALBANS

PSYCHIATRIC HOSPITAL

(A Non-Profit Organization)

Radford, Virginia

Telephone: 639-2482

STAFF

James P. King, M.D., Director

William D. Keck, M.D.
Clinical Director
James K. Morrow, M.D.
Silas R. Beatty M.D.
Jack M. Rogers, M.D.

Edward W. Gamble, III, M.D.
Morgan E. Scott, M.D.
Jean M. Glasgow, M.D.
J. William Giesen, M.D.
Internist (Consultant)

Clinical Psychology:
Thomas C. Camp, Ph.D.
Artie L. Sturgeon, Ph.D.

Don Phillips
Administrator

AFFILIATED CLINICS

Bluefield Mental Health Center
525 Bland St., Bluefield, W. Va.
David M. Wayne, M.D.
Phone: 325-9159

Beckley Mental Health Center
109 E. Main Street, Beckley, W. Va.
W. E. Wilkinson, M.D.
Malcolm G. MacAulay, M.D.
Phone: 253-8397

Charleston Mental Health Center
1119 Virginia St., E., Charleston, W. Va.
Richard D. Kitching, M.D.
Phone: 344-3578

Norton Mental Health Clinic
Norton Community Hospital, Norton, Va.
Pierce D. Nelson, M.D.
Phone: 1090

CITY VIEW SANITARIUM

For the diagnosis and treatment of nervous and mental disorders, and addictions to alcohol and drugs.

Established 1907

JOHN W. STEVENS, M.D.

Founder

NASHVILLE, TENNESSEE

Remember, Doctor—

It's been

Tafel Surgical Supply Co., Inc.

SINCE 1889

for

Drugs, Orthopedic, Surgical

Supplies & Equipment

1203 Church Street

Nashville, Tennessee

Murfreesboro—Vacancies

STAFF PHYSICIANS for 1275 bed neuropsychiatric hospital, including 350 general medical and geriatric. Modern facilities for diagnosis and treatment of mental illness. Salary $11,150 to $18,405 depending on qualifications; fringe benefits; cost of moving to Murfreesboro will be paid by Veterans Administration; visit here for evaluation can be arranged at our expense. Excellent educational opportunities for students in this area. Contact—Director, Veterans Administration Hospital, Murfreesboro, Tennessee.



ACHROCIDIN®

TETRACYCLINE HCl-ANTIHISTAMINE-ANALGESIC COMPOUND

Each Tablet contains:

ACHROMYCIN® Tetracycline HCl	125 mg.	Caffeine	30 mg.
Acetophenetidin (Phenacetin)	120 mg.	Salicylamide	150 mg.
		Chlorothen Citrate	25 mg.

Effective in controlling tetracycline-sensitive bacterial infection and providing symptomatic relief in allergic diseases of the upper respiratory tract. Possible side effects are drowsiness, slight gastric distress, overgrowth of nonsusceptible organisms, tooth discoloration. The last named may occur only if the drug is given during tooth formation (late pregnancy, the neonatal period, early childhood). Average Adult Dosage: 2 Tablets four times daily.

LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, New York

Lederle

7142 3

Nashville Surgical Supply Company

The Physician and Hospital's Complete Supply & Service Source

Physicians equipment and supplies

Hospital equipment and supplies

Laboratory equipment and supplies

THE MOST COMPLETE DRUG AND BIOLOGICAL SUPPLY SOURCE IN TENNESSEE

Distributor for Standard and Mattern X-Ray Equipment and Supplies

24-Hour Emergency Service

Nashville Surgical Supply Co., Incorporated

1911 Church St.

Nashville, Tennessee

Phone AL 5-4601

OFFICERS OF THE TENNESSEE MEDICAL ASSOCIATION, 1964

President—Bland W. Cannon, M.D., Suite 402-B, 20 So. Dudley Street, Memphis
President-Elect—R. H. Kampmeier, M.D., Vanderbilt Hospital, Nashville
Vice-President—Joseph L. Raulston, M.D., 5338 Broadway, N.E., Knoxville
Vice-President—Charles A. Trahern, M.D., 1724 Memorial Drive, Clarksville
Vice-President—Henry B. Gotten, M.D., 1412 Madison Avenue, Memphis
Secretary—John H. Burkhart, M.D., 3000 No. Broadway, Knoxville
Executive Director—Mr. J. E. Ballentine, 112 Louise Avenue, Nashville 5

BOARD OF TRUSTEES

*Robert M. Finks, M.D., Chairman and Treasurer (1964) 2122 West End Ave., Nashville
*J. Malcolm Aste, M.D., (1964) 188 South Bellevue, Memphis
John H. Burkhart, M.D., (1964) 3000 No. Broadway, Knoxville
Bland W. Cannon, M.D., (1965) 402-B, 20 South Dudley Street, Memphis
*E. L. Caudill, Jr., M.D., (1966) 114 East H Street, Elizabethton
C. D. Hawkes, M.D., (1966) 220 So. Claybrook Street, Memphis
G. Baker Hubbard, M.D., (1966) Jackson Clinic, Jackson
*Joseph W. Johnson, Jr., M.D., (1965) Interstate Building, Chattanooga
*R. H. Kampmeier, M.D., (1966) Vanderbilt Hospital, Nashville
K. M. Kressenberg, M.D., (1966) 215 Cedar Lane, Pulaski
William J. Sheridan, M.D., (1964) Medical Arts Building, Chattanooga

*Executive Committee of Board of Trustees.

SPEAKER OF THE HOUSE

J. Malcolm Aste, M.D., 188 South Bellevue, Memphis
Vice-Speaker—Tom E. Nesbitt, M.D., 1921 Hayes Street, Nashville

COUNCILORS

First District—J. O. Hale, M.D., 401 North Boone St., Johnson City (1964)
Second District—B. M. Overholt, M.D., 717 Cumberland Avenue, S.W., Knoxville (1965)
Third District—M. F. Langston, M.D., 103 Palisades, Signal Mountain (1964)
Fourth District—Kenneth L. Haile, M.D., 137 W. Second Street, Cookeville (1965)
Fifth District—Coulter S. Young, M.D., Manchester (1964)
Sixth District—Harry T. Moore, Jr., M.D., 326 Mid-State Medical Center, Nashville (1965)
Seventh District—Wm. K. Owen, M.D., Pulaski (1964)
Eighth District—O. M. McCallum, M.D., Henderson (1965)
Ninth District—R. David Taylor, M.D., 620 Main Street, Dyersburg (1964)
Tenth District—Francis H. Cole, M.D., 188 South Bellevue, *Chairman*, Memphis (1965)

DELEGATES TO THE AMA

Alvin J. Ingram, M.D., 869 Madison Avenue, Memphis (1965)
Chas. C. Smeltzer, M.D., 521 W. Cumberland Avenue, Knoxville (1964)
Daugh W. Smith, M.D., 1926 Hayes Street, Nashville (1965)
Alternates:
Julian K. Welch, Jr., M.D., Brownsville (1965)
Wm. J. Sheridan, M.D., Medical Arts Building, Chattanooga (1964)
W. O. Vaughan, M.D., 2103 Hayes Street, Nashville (1965)

PRESIDENTS AND SECRETARIES OF COUNTY MEDICAL SOCIETIES, 1964-65

COUNTY	PRESIDENTS	SECRETARIES
Bedford County	Henry Feldhaus, Jr., M.D., 484 Union St., Shelbyville	A. T. Richards, M.D., 208 Madison, Shelbyville
Benton-Humphreys County	Arthur W. Walker, M.D., Waverly	Hiram C. Capps, M.D., Waverly
Blount County	H. T. Vandergriff, M.D., Med. Arts Bldg., Maryville	O. L. Simpson, M.D., Center Bldg., Maryville
Bradley County	Jas. C. Lowe, M.D., 755 Broad St., N. W., Cleveland	James L. Allen, M.D., 420 Central Ave., N. W., Cleveland
Campbell County	James D. Crutchfield, M.D., 100 E. Ave., Lafollette	Roscoe C. Pryse, M.D., Lafollette
Chattanooga-Hamilton County	Edward T. Newell, Jr., M.D., 707 Walnut St., Chattanooga	C. Robert Clark, M.D., 210 Med. Arts Building, Chattanooga Mrs. Flo Richardson, 109 Med. Arts Bldg., Chattanooga—Executive Secy.
Cocke County	Glen C. Shults, M.D., 501 E. Main St., Newport	R. B. McMahan, M.D., 501 E. Main St., Newport
Coffee County	Ralph Brickell, M.D., 601 N. Atlantic St., Tullahoma	Earl Roles, M.D., Tullahoma
Consolidated Medical Assembly of West Tennessee	Lee Rush, M.D., Somerville	Harold Yarbro, M.D., 700 W. Forest St., Jackson
Cumberland County	R. G. Cravens, M.D., 311 S. Main St., Crossville	Jas. T. Callis, M.D., Crossville
Nashville Academy of Medicine Davidson County	Addison Scoville, M.D., 2104 West End Ave., Nashville	Carl Gessler, M.D., 2760 Lebanon Rd., Nashville, 37214 Mr. Jack Drury, 112 Louise Avenue, Nashville—Executive Secretary
Dickson County	W. A. Bell, M.D., 222 Church St., Dickson	Mary Baxter Cook, M.D., Charlotte
Fentress County	Guy C. Pinckley, M.D., Jamestown	B. F. Allred, M.D., Jamestown
Franklin County	E. W. Kirby-Smith, M.D., Sewanee	George L. Smith, M.D., Winchester
Giles County	K. M. Kressenberg, M.D., 215 Cedar Lane, Pulaski	W. H. Murrey, M.D., 215 Cedar Lane, Pulaski
Greene County	J. R. McKinney, M.D., Takoma Hos., Greeneville	John Lay, M.D., 222 N. Main St., Greeneville
Hamblen County	Luke Nabers, M.D., Morristown	E. Richard Baker, M.D., White Pine
Hawkins County	C. C. Johnson, M.D., 50 N. Church St., Rogersville	W. A. Phillips, M.D., Citizens Union Bank Bldg., Rogersville
Henry County	Richard G. Fish, M.D., Commercial Bank, Bldg., Paris	J. D. Mobley, M.D., E. Wood Clinic, Paris
Hickman-Perry County	Sam O. Jones, M.D., Centerville	Parker D. Elrod, M.D., Centerville
Jackson County	E. M. Dudney, M.D., Gainesboro	J. S. Johnson, M.D., Gainesboro
Knoxville Academy of Medicine	John H. Burkhart, M.D., 3000 Broadway, N. E., Knoxville	Ray J. Leffler, M.D., East Tenn. Baptist Hospital, Knoxville
Lawrence County	W. O. Crowder, Jr., M.D., 233 E. Gaines St., Lawrenceburg	James C. Hudgins, M.D., 200 S. Military, Lawrenceburg
Lincoln County	C. Doyne Toone, M.D., South Elk Avenue, Fayetteville	Anne U. Bolner, M.D., Lincoln County Health Dept., Fayetteville
Macon County	Jack C. Clark, M.D., Lafayette	C. C. Chitwood, Jr., M.D., Lafayette
Marshall County	W. S. Poarch, M.D., Lewisburg	H. C. Harris, M.D., Church St., Lewisburg
Maury County	Leon Ward, M.D., 400 W. 7th St., Columbia	Lawrence Nickell, M.D., Maury County Hospital, Columbia
McMinn County	R. Danny Hays, M.D., 7 Grove, N. W., Athens	Robert G. Hewgley, M.D., Med. Arts Bldg., Box 352, Athens
Memphis-Shelby County	William T. Satterfield, Sr., M.D., 1188 Minna, Memphis, 38104	J. Warren Kyle, M.D., 1079 Madison Ave., Memphis, 38104 Mr. Les Adams, 774 Adams Avenue, Memphis—Executive Secretary
Monroe County	Joe K. Wallace, M.D., Sweetwater	Joe Henshaw, M.D., 404 N. High St., Sweetwater
Montgomery County	Howard R. Kennedy, M.D., 419 Franklin St., Clarksville	Frank J. Malone, Jr., M.D., 408 Franklin St., Clarksville
Northwest Tennessee Academy of Medicine	J. H. Ragsdale, M.D., Ripley	Art Murphy, M.D., Trimble
Overton County	W. G. Quarles, M.D., Livingston	Jack M. Roe, M.D., Livingston
Putnam County	Claude M. Williams, M.D., General Hospital, Cookeville	Thurman Shipley, M.D., 135 W. 2nd St., Cookeville
Roane-Anderson County	Albert J. Ahler, M.D., 202 Carter St., Harriman	Robert DePersio, M.D., Med. Arts Bldg., Oak Ridge
Robertson County	Warren G. Hayes, M.D., Bell Bldg., Springfield	Sue C. Atwood, M.D., 500 Main, Springfield
Rutherford County	Lois Kennedy, M.D., 104 S. Spring St., Murfreesboro	Radford Smith, M.D., 420 N. University St., Murfreesboro
Scott County	Maxwell Huff, M.D., Oneida	Roy L. McDonald, M.D., Oneida
Sevier County	Charles L. Roach, M.D., Sevierville	Charles E. Waldrup, M.D., Gatlinburg
Smith County	Thayer S. Wilson, M.D., Carthage	David G. Petty, M.D., Carthage
Sullivan-Johnson County	F. G. McConnell, M.D., 142 Cherokee St., Kingsport	Robert E. Keith, M.D., Med. Dept., Tenn. Eastman Co., Kingsport
Sumner County	W. Gordon Doss, M.D., Hendersonville	Kermit E. Jones, M.D., Westmoreland
Tipton County	Travis L. Bolton, M.D., 728 E. Sherrod, Covington	Warren A. Alexander, M.D., W. Pleasant Avenue, Covington
Warren County	J. E. Puckett, M.D., 203 West Main St., McMinnville	J. C. Gaw, M.D., 315 N. Spring St., McMinnville
Washington-Carter-Unicoi County	Dillard M. Sholes, Jr., M.D., 203 N. Sycamore St., Elizabethton	Gilbert A. Rannick, M.D., 107 W. Fairview Ave., Johnson City
Weakley County	Edward Welles, Jr., M.D., Dresden	M. K. Bottorff, M.D., Martin
White County	Donald H. Bradley, M.D., Sparta	Charles A. Mitchell, M.D., Sparta
Williamson County	Joel Lee, M.D., Franklin	H. P. Hoover, M.D., Franklin
Wilson County	Joe Frank Bryant, M.D., McFarland Hospital—Lebanon	T. R. Puryear, M.D., 239 E. Main, Lebanon

Is There A Doctor - - - -

WHO WANTS TO DRIVE A NEW CAR—

With No Capital Investment . . . Simplified Tax Deductions . . . Which May Save You Money . . . And No Worries About—Maintenance . . . Depreciation . . . Tires . . . Insurance . . . Or License?

Call or Visit the Lease Department of

OAK SALES AND SERVICE **MOTORS**

915 FIFTH AVE. NORTH
NASHVILLE 3, TENN.

Tel. AL 5-8661

We are a member of Largest Leasing System in the U. S.

Ford AUTHORIZED LEASING SYSTEM

List of Advertisers in This Issue

American Cyanamid Company	XVI, XIX, XXIV, XXV, XLIII	Murfreesboro VA Hospital	XLII
Ames Co., Inc.	XLVII	Mutual Benefit Life Ins. Co.	XXXIX
Appalachian Hall	XXXIV	Nashville Pure Milk Co.	XXXVII
Baker Laboratories, Inc.	VIII, IX	Nashville Surgical Supply Co., Inc.	XLIV
Blood Bank Foundation	XIV	Oak Motors	XLVI
Brayten Pharmaceutical Company	XX	Parke-Davis and Company	II
Burroughs Wellcome & Co.	VI, XXI	Physicians Mutual Ins. Co.	XXXVIII
Chatham Pharmaceuticals, Inc.	XVIII	Robins, A. H. Co.	VII, Insert, XIII, XXVIII, XXIX
City View Sanitarium	XLII	Roche Laboratories	XLVIII
Coca-Cola	XXXVII	St. Albans	XLI
Endo Laboratories	XVII	Saunders, W. B. Company	III
Farringer & Company	XL	Searle, G. D. & Co.	XXXIII
First Texas Pharmaceuticals, Inc.	X	Smith, Kline & French Laboratories	XXX
Guild Opticians	XXXIV	Smith, Reed, Thompson & Ellis Co.	XXXV
Hart Laboratories	XXVI	Tafel Surgical Supply Co., Inc.	XLII
Hill Crest Sanitarium	XXXVI	Thompson, M. R., Inc.	XXIII
Kay Surgical, Inc.	XV	Upjohn	XIV, XV
Lilly, Eli and Co.	I, XXXII	Wallace Laboratories	XVIII, XXVII, XXXI
McQuiddy Printing Co.	XXXVI	White Surgical Supply Co.	XXXVII
		Winthrop Laboratories	V, XXII





Don't feel sorry for **ACETEST**® Reagent Tablet — It still does a good job. But new, improved **KETOSTIX**® "dip-and-read" test for ketone bodies in urine, serum, or plasma, is more convenient. It's faster (only 15 seconds) and more sensitive. When you use **KETOSTIX** Reagent Strips you don't even need a medicine dropper. Simply dip and read **KETOSTIX** and get a more definitive detection of ketone bodies. Still like **ACETEST** Reagent Tablets? That's okay, but remember, we said, "**KETOSTIX** Reagent Strips are more modern." □ Ames Company, Inc., Elkhart, Indiana. 69964

AMES

anxiety
anxiety
anxiety
anxiety
anxiety
anxiety
anxiety
anxiety
anxiety
anxiety
anxiety reduced to its proper perspective

LIBRIUM®
(chlordiazepoxide HCl)
the successor
to the tranquilizers

ROCHE

In prescribing: Dosage—Adults: Mild to moderate anxiety and tension, 5 or 10 mg t.i.d. or q.i.d.; severe states, 20 or 25 mg t.i.d. or q.i.d. Ge patients: 5 mg b.i.d. to q.i.d. Cautions—Occasional side effects, often dose-related, are drowsiness, ataxia, minor skin rashes, menstrual irregula nausea and constipation. Paradoxical reactions may occasionally occur in psychiatric patients. Individual maintenance dosages should be detern Advise patients against possibly hazardous procedures until maintenance dosage is established. Though compatible with most drugs, use care in bining with other psychotropics, particularly MAO inhibitors or phenothiazines; warn patients of possible combined effects with alcohol. Observe precautions in impaired renal or hepatic function, and in long-term treatment. Caution should be exercised in prescribing any therapeutic age pregnant patients. Supplied—Capsules, 5 mg, 10 mg and 25 mg, bottles of 50 and 500.

THE JOURNAL OF THE TENNESSEE MEDICAL ASSOCIATION

LIBRARY OF THE RHODE ISLAND MEDICAL SOCIETY

TENNESSEE MEDICAL ASSOCIATION
129th Annual Meeting
Peabody Hotel, Memphis, Tennessee
April 12-15, 1964

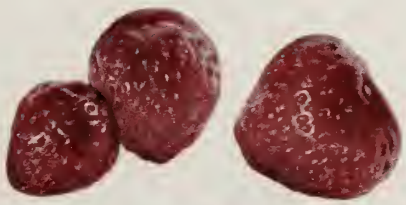
ANNUAL MEETING PROGRAM ISSUE

MARCH, 1964

Volume 57 **Number 3**

Table of Contents on Page IV
Index to Advertisers on Page XL

tempting strawberry taste treat for your iron-deficient patients



Zentron® Chewable

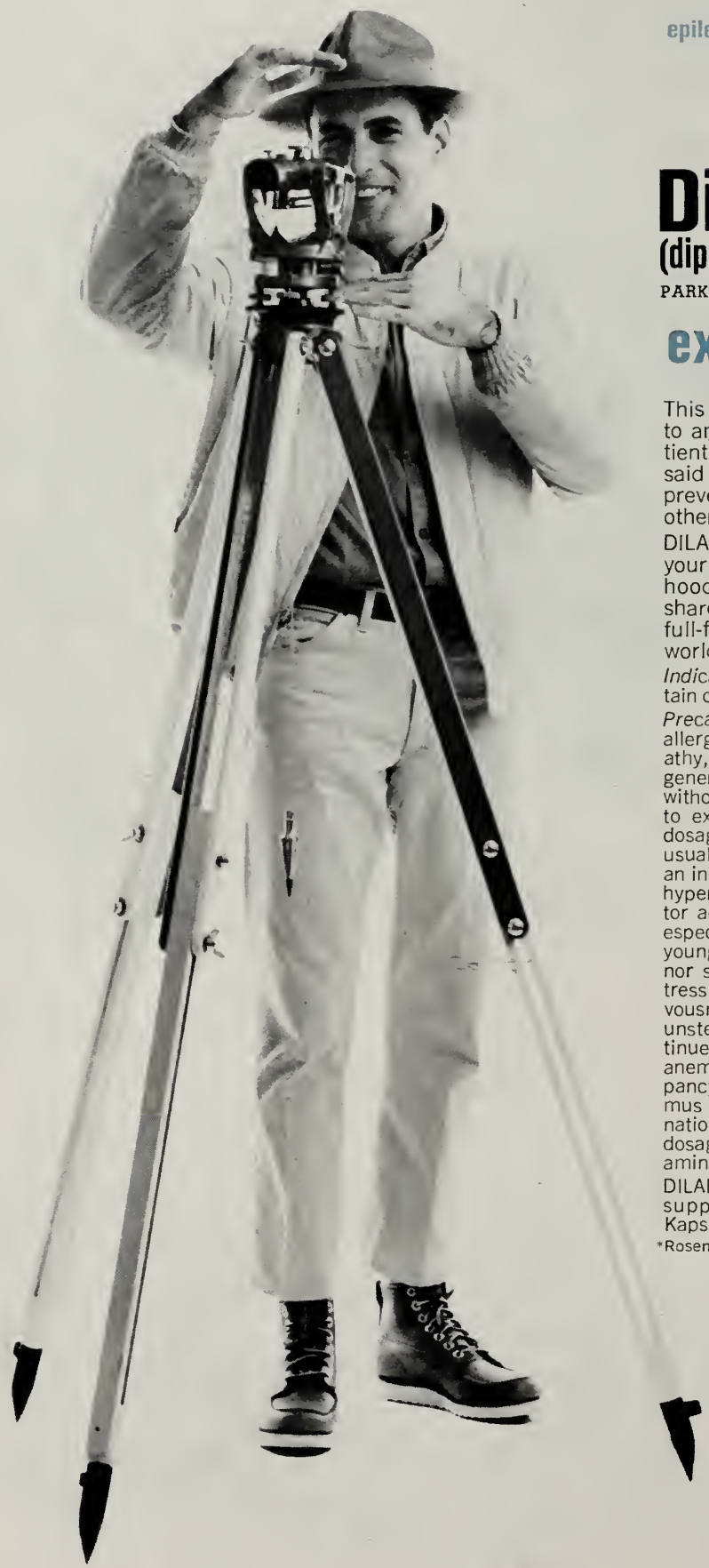
Iron, Vitamin B Complex, and Vitamin C

Combines iron with B complex vitamins in a chewable tablet

Additional information available upon request.
Eli Lilly and Company, Indianapolis 6, Indiana.

Lilly

400137



epilepsy may limit opportunity...



Dilantin®
(diphenylhydantoin)

PARKE-DAVIS

extends horizons

This agent "...has brought new hope to an entire generation of seizure patients....With judicious use, it may be said that it alone is responsible for the prevention of more seizures than any other drug."*

DILANTIN (diphenylhydantoin) can help your epileptic patient to earn a livelihood...to prove his worth...and to share in the daily give-and-take as a full-fledged member of the workaday world.

Indications: Grand mal epilepsy and certain other convulsive states.

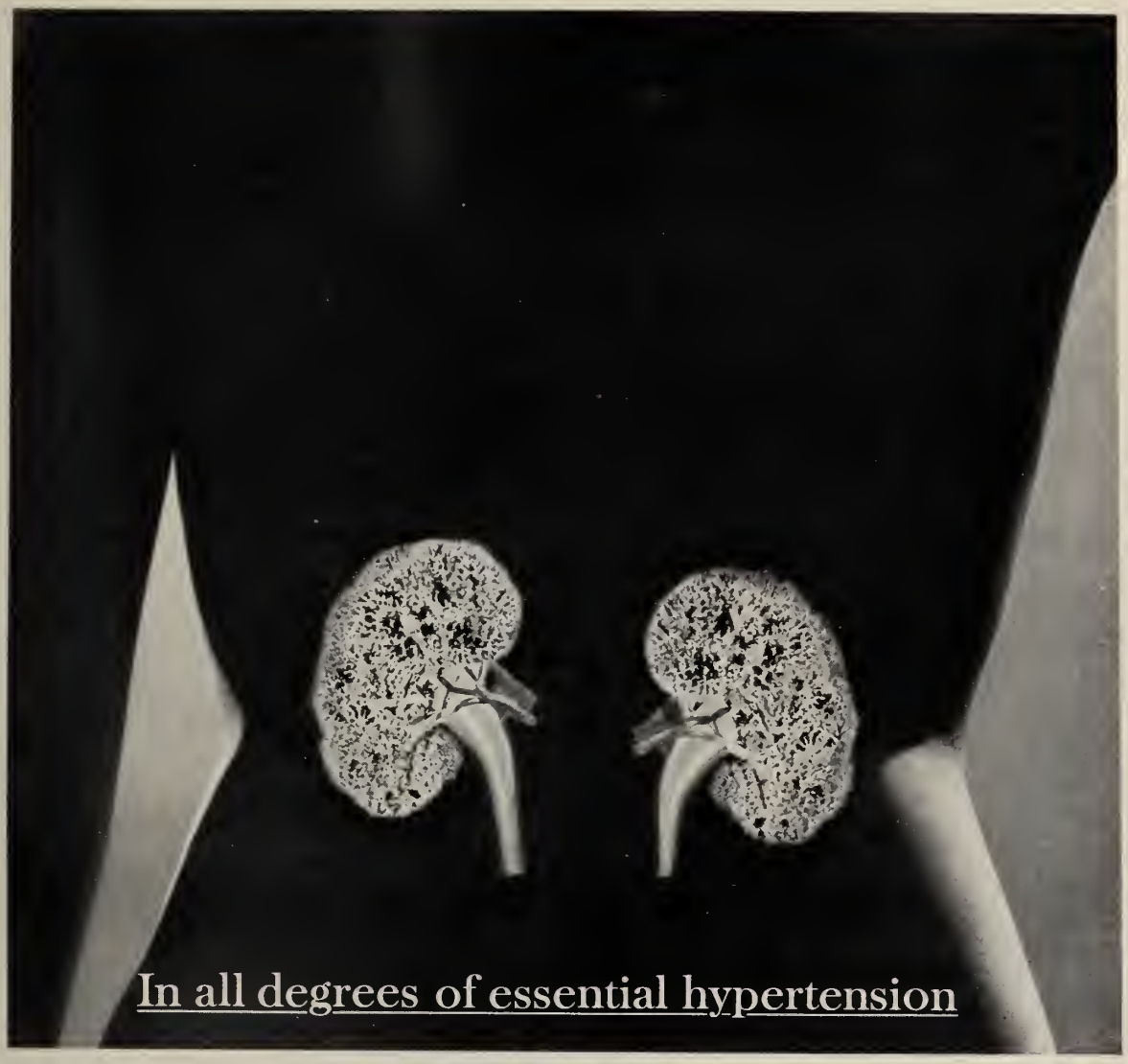
Precautions: Toxic effects are infrequent: allergic phenomena such as polyarthropathy, fever, skin eruptions, and acute generalized morbilliform eruptions with or without fever. Rarely, dermatitis goes on to exfoliation with hepatitis, and further dosage is contraindicated. Eruptions then usually subside. Though mild and rarely an indication for stopping dosage, gingival hypertrophy, hirsutism, and excessive motor activity are occasionally encountered, especially in children, adolescents, and young adults. During initial treatment, minor side effects may include gastric distress, nausea, weight loss, transient nervousness, sleeplessness, and a feeling of unsteadiness. All usually subside with continued use. Megaloblastic anemia, aplastic anemia, leukopenia, granulocytopenia and pancytopenia have been reported. Nystagmus may develop. Nystagmus in combination with diplopia and ataxia indicates dosage should be reduced. Periodic examination of the blood is advisable.

DILANTIN (diphenylhydantoin sodium) is supplied in several forms including Kapseals® containing 0.1 Gm. and 0.03 Gm.

*Roseman, E.: *Neurology* **11**:912, 1961. 33664

PARKE-DAVIS

PARKE, DAVIS & COMPANY, Detroit, Michigan 48232



Help protect the kidneys and other threatened organs

When treatment of hypertension is effective the danger of damage to the renal system is reduced.[1,2] "Hypertensive patients suffer from vascular deterioration roughly proportional to the severity of the hypertension... Reduction of blood pressure to normotensive levels reduces or arrests the progress of vascular damage with a resultant decrease in morbidity and mortality."[1] *Because Rautrax-N lowers blood pressure so effectively, it will help provide this important protection not only for the kidneys but also for the heart and brain of your hypertensive patients.* Rautrax-N is effective in mild,[3] moderate,[3,4] or severe hypertension.[4,5]

Dosage: Initially, 1 to 4 tablets daily preferably at mealtime. For maintenance, 1 or 2 tablets daily.

Side effects and precautions: Rauwolfia preparations may cause reversible extrapyramidal symptoms and emotional depression. Caution indicated in use with depression, suicidal tendencies, peptic ulcer. Minor side effects: diarrhea, weight gain, nausea, drowsiness. Bendroflumethiazide may cause reversible hyperuricemia and/or gout, unmask latent diabetes, increase glycosuria in diabetics. Caution indicated in use for patients on digitalis, with severely damaged kidneys, renal insufficiency, increasing azotemia, cirrhosis. Contraindicated in complete renal shutdown. Minor side effects: leg or abdominal cramps, pruritis, paresthesias, mild rashes.

Supply: Rautrax-N—capsule-shaped tablets providing 50 mg. Raudixin® [Rauwolfia serpentina whole root], 4 mg. Naturetin® [bendroflumethiazide], and 400 mg. potassium chloride. *Rautrax-N Modified*—50 mg. Raudixin [Rauwolfia serpentina whole root], 2 mg. Naturetin [bendroflumethiazide], and 400 mg. potassium chloride, in capsule-shaped tablets. For full information, see your Squibb Product Reference or Product Brief.

References: (1) Moyer, J. H., and Heider, C.: Am. J. Cardiol. *9*:920 (June) 1962. (2) Brest, A. N., and Moyer, J. H.: Pennsylvania M. J. *63*:545 (Apr.) 1960. (3) Berry, R. L., and Bray, H. P.: J. Am. Geriatrics Soc. *10*:516 (June) 1962. (4) Hutchison, J. C.: Current Therap. Res. *4*:610 (Dec.) 1962. (5) Feldman, L. H.: North Carolina M. J.: *23*:248 (June) 1962.

SQUIBB
Squibb Quality
—the Priceless Ingredient
SQUIBB DIVISION Olin

RAUTRAX®-N RAUWOLFIA SERPENTINA WHOLE ROOT (50 MG.), BENDROFLUMETHIAZIDE (4 MG.) WITH POTASSIUM CHLORIDE (400 MG.), SQUIBB

The Journal of the TENNESSEE MEDICAL ASSOCIATION

Published Monthly

By Tennessee Medical Association

OFFICE OF PUBLICATION, 112 LOUISE AVENUE, NASHVILLE 5, TENNESSEE

Second Class Postage Paid at Nashville, Tennessee

Volume 57
No. 3

MARCH, 1964

Per Year, $5.00
Single Copy, 50 Cents

Published Monthly

Contents

Carotid Cavernous Fistula, RICHARD L. DESAUSSURE, M.D., ROLAND H. MYERS, M.D., JAMES C. SIMMONS, M.D., Memphis, Tenn. 91

Evaluation and Surgical Management of Atherosclerotic Vascular Lesions, WILLIAM H. EDWARDS, M.D., Nashville, Tenn. 108

Placement Service 94

Special Section 97

Clinicopathologic Conference 116

President's Letter 121

Editorial 122

Deaths 125

Programs and News of Medical Societies 125

National News 126

Medical News in Tennessee 127

Personal News 129

Announcements 130

Instructions to Contributors

Manuscripts submitted for consideration for publication in the JOURNAL OF THE TENNESSEE MEDICAL ASSOCIATION should be addressed to the Editor, Dr. R. H. Kampmeier, Vanderbilt University Hospital, Nashville 12, Tennessee.

Manuscripts must be typewritten on one side of letter-weight paper. Either double or triple spacing and wide margins must be provided to facilitate editing which will be legible for the printer.

Bibliographic references should not exceed ten or twelve in number documenting key publications. They should appear at the end of the paper. The bibliographic references must conform to the style used in the American Medical Association publications, as,—Alais, F. G.: What Is Known About It, J. Tennessee M. A., 35:132, 1950.

Illustrations must be mounted on white cardboard and be numbered. The editor will determine the number, if any, of illustrations to be used. Additional illustrations will be charged to the author. The author's name should appear on the back of each illustration.

If reprints are desired, the requested number should be indicated in the letter accompanying the manuscript. The author will be billed by the publisher.

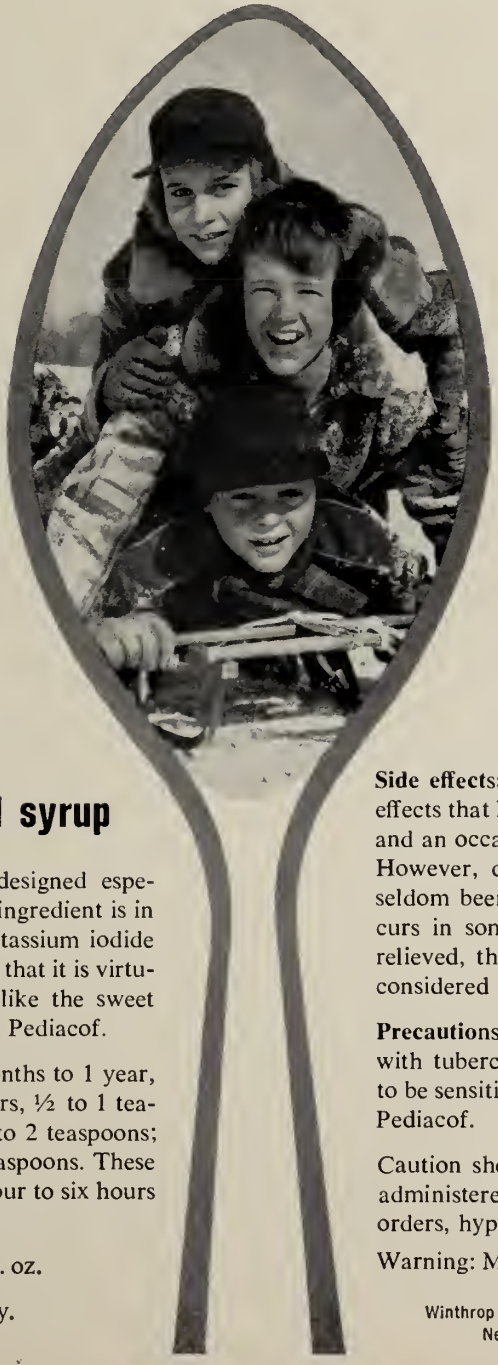
DEVOTED TO THE INTERESTS OF THE MEDICAL PROFESSION OF TENNESSEE
R. H. KAMPMEIER, M.D., Editor
This Association Does Not Officially Indorse Opinions Presented in Different Papers Published herein
Copyright, 1964, by the Tennessee Medical Journal

Special cough formula for children

Pediacof®

Each teaspoon (5 ml.) contains codeine phosphate 5 mg., Neo-Synephrine® hydrochloride (brand of phenylephrine hydrochloride) 2.5 mg., chlorpheniramine maleate 0.75 mg. and potassium iodide 75 mg.

soothing decongestant and expectorant



bright red, pleasant-tasting, raspberry-flavored syrup

Pediacof is different. It is designed especially for children, and each ingredient is in the right proportion. The potassium iodide in Pediacof is so well masked that it is virtually unnoticeable. Children like the sweet raspberry flavor of bright red Pediacof.

Dosage: Children from 6 months to 1 year, ¼ teaspoon; from 1 to 3 years, ½ to 1 teaspoon; from 3 to 6 years, 1 to 2 teaspoons; and from 6 to 12 years, 2 teaspoons. These doses are to be given every four to six hours as needed.

How supplied: Bottles of 16 fl. oz.

Available on prescription only.
Exempt Narcotic.

Side effects: The only significant untoward effects that have occurred are mild anorexia and an occasional tendency to constipation. However, discontinuance of Pediacof has seldom been required. Mild drowsiness occurs in some patients but, when cough is relieved, the quieting effect of Pediacof is considered beneficial in many instances.

Precautions and contraindications: Patients with tuberculosis or those who are known to be sensitive to iodides should not be given Pediacof.

Caution should be exercised if Pediacof is administered to patients with cardiac disorders, hypertension or hyperthyroidism.

Warning: May be habit forming.

Winthrop Laboratories
New York, N.Y.

Winthrop



Baker's

VOL. 1 NO. 1 FORECAST: HAPPY MOTHERS AND BABIES

NEW 'UNDER
SOLVES DIAP

Trio of suspects identified...

Bacteria a Prime Culprit Organisms such as Bacillus ammoniagenes and Alcaligenes faecalis metabolize urine into chemical irritants. Proper laundering of diapers helps reduce number of organisms, but cannot completely eliminate bacterial growth.

Ammonia and Urea Implicated Ammonia produced by microorganisms is a major cause of skin irritation that leads to diaper rash.

The Moisture—Maceration—Infection Cycle Moisture from urine and feces, combined with diaper friction, results in damp, macerated skin—an ideal environment for bacterial proliferation. In the absence of energetic countermeasures, the moisture—maceration—infection cycle continues, leads to chronic diaper rash problems.



by News



BAKER LABORATORIES, INC.

VER' AGENT RASH CASE!

Diapersil successful!

ericidal to Ammonia-tting Pathogens Dia-il contains benzalko-n chloride, which is ily 'cidal' to organisms icated in diaper rash. zalkonium chloride a proven record of ef-veness and safety.

Continued 'Uripellent' Protection Silicones in Diapersil form a water-resistant coating which shields the skin from bacterial by-products and from maceration. Silicones have been found outstandingly effective in diaper rash, even when other types of therapy have failed.

Soothing to Inflamed Skin Panthenol, incorporated in a soothing and non-sensitizing base, relieves itching and pain, and gently promotes healing. Diapersil thus provides prompt symptomatic relief in diaper rash as well as in other pediatric skin conditions.

KER'S **DIAPERSIL**™ CREME

ula: panthenol, dimethylpolysiloxane, benzalkonium chloride, in a watermiscible, non-sensitizing cream base

To treat and prevent diaper rash, excoriated tocks, chafing, heat rash and similar conditions

IER LABORATORIES, INC. Subsidiary of U.S. Vitamin & Pharmaceutical Corp.



release for hostility?

Overeating is often an outlet for feelings of hostility. Many people take out their anger by overindulgence at or between meals. As a result they become overweight.

'Eskatrol' *Spansule* capsules both control appetite and relieve the emotional stress that causes overeating. That's why so many patients are losing more pounds with 'Eskatrol'.

ESKATROL® Trademark

Each capsule contains Dexedrine® (brand of dextroamphetamine sulfate), 15 mg., and Compazine® (brand of prochlorperazine), 7.5 mg., as the maleate.

SPANSULE®

brand of sustained release capsules

because emotions play an important role in overweight

Brief Summary of Principal Side Effects and Cautions

Side effects (chiefly nervousness and insomnia) are infrequent, and usually mild and transitory. *Cautions:* 'Eskatrol' *Spansule* capsules should be used with caution in the presence of severe hypertension, advanced cardiovascular disease, or extreme excitability. There is a possibility, though little likelihood, of blood or liver toxicity or neuromuscular reactions (extrapyramidal symptoms) from the phenothiazine component in 'Eskatrol' *Spansule* capsules.

For complete prescribing information, please see *PDR* or available literature.

Supplied: Bottles of 50 capsules.

Smith Kline & French Laboratories SK&F



ACHROCIDIN®

TETRACYCLINE HCl-ANTIHISTAMINE-ANALGESIC COMPOUND

Each Tablet contains:	
ACHROMYCIN® Tetracycline HCl	125 mg.
Acetophenetidin (Phenacetin)	120 mg.
Caffeine	30 mg.
Salicylamide	150 mg.
Chlorothen Citrate	25 mg.

Each (5 cc.) Teaspoonful of Syrup (lemon-lime flavored) contains:	
ACHROMYCIN® Tetracycline equivalent to Tetracycline HCl	125 mg.
Acetophenetidin (Phenacetin)	120 mg.
Salicylamide	150 mg.
Ascorbic Acid (C)	25 mg.
Pyrilamine Maleate	15 mg.
Methylparaben 4 mg.; Propylparaben 1 mg.	

Effective in controlling tetracycline-sensitive bacterial infection and providing symptomatic relief in allergic diseases of the upper respiratory tract. Possible side effects are drowsiness, slight gastric distress, overgrowth of nonsusceptible organisms, tooth discoloration. The last named may occur only if the drug is given during tooth formation (late pregnancy, the neonatal period, early childhood). Average Adult Dosage: 2 Tablets or 2 Teaspoonfuls of Syrup four times daily. The total average daily dosage for children, determined by the tetracycline content, is 10 to 20 mg. per pound body weight, divided into four equal doses.

LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, New York
7143-3

Lederle

because
it works*
in coughs
Cheracol



he'll like the way
it tastes

*By liquefying secretions in the respiratory tree, Cheracol makes it easier for the patient to cough—in accord with the physiologic defense mechanism.

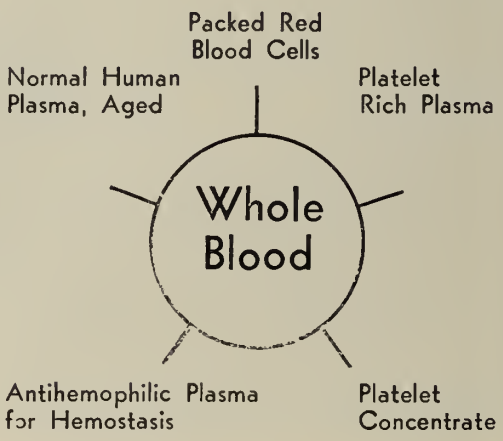
Upjohn

© 1964, THE UPJOHN COMPANY

THE UPJOHN COMPANY, KALAMAZOO, MICHIGAN

Follow
the trend to

BLOOD COMPONENT THERAPY



Best for the patient and More Economical.

All available from

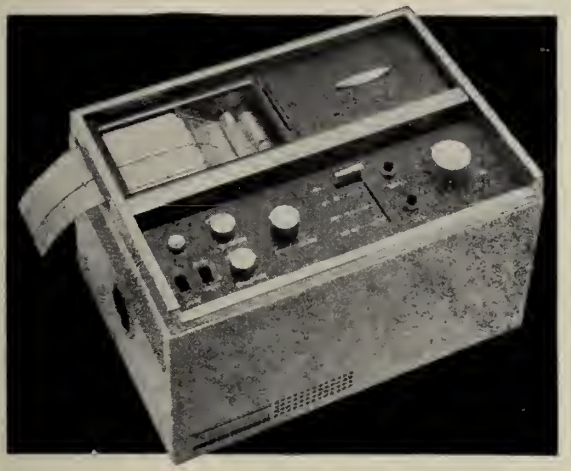
BLOOD BANK FOUNDATION

1921 Broadway ALpine 4-3551

NASHVILLE, TENNESSEE



Doctor, you can take it with you!



THE BURDICK EK-III **DUAL-SPEED ELECTROCARDIOGRAPH**

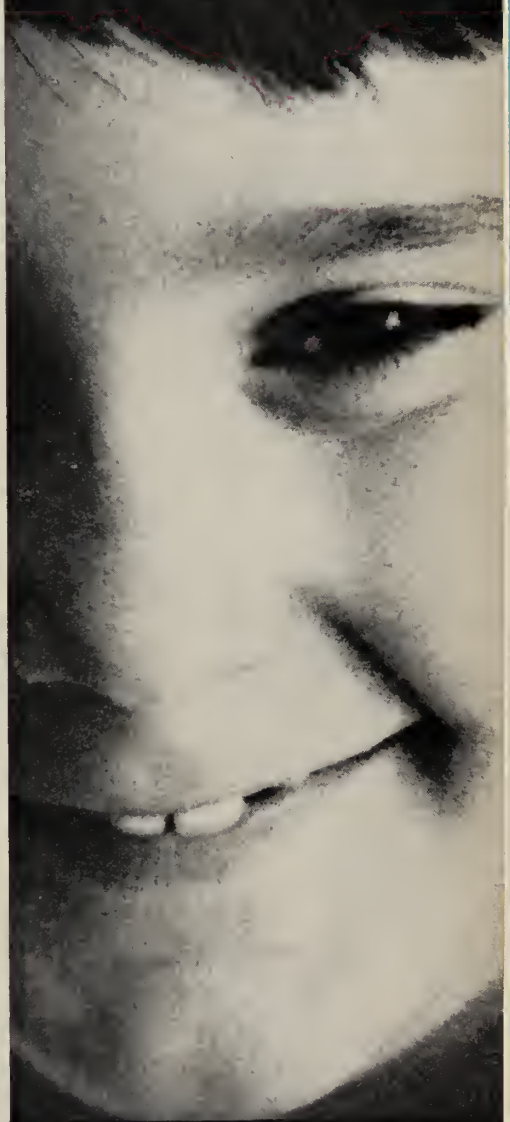
- 26½ pounds light, including all accessories and carrying case! Ideal for office or bedside use
- 25 or 50 mm. speed — an accurate record for an accurate diagnosis
- frequency response greatly in excess of minimum A.M.A. standards
- top-loading paper drive eliminates tedious paper-threading adjustments

Burdick

THE BURDICK CORPORATION
MILTON, WISCONSIN
Branch Offices: New York • Chicago • Atlanta • Los Angeles
Dealers in all principal cities

KAY SURGICAL, INC.
1144 Madison Ave. Memphis, Tenn.

because
it worked*
in coughs
Cheracol®



he liked the way it tasted

*By liquefying secretions in the respiratory tree, Cheracol made it easier for the patient to cough—in accord with the physiologic defense mechanism.

©1964, THE UPJOHN COMPANY

Upjohn
THE UPJOHN COMPANY, KALAMAZOO, MICHIGAN

Butazolidin®
brand of phenylbutazone

Tablets of 100 mg.

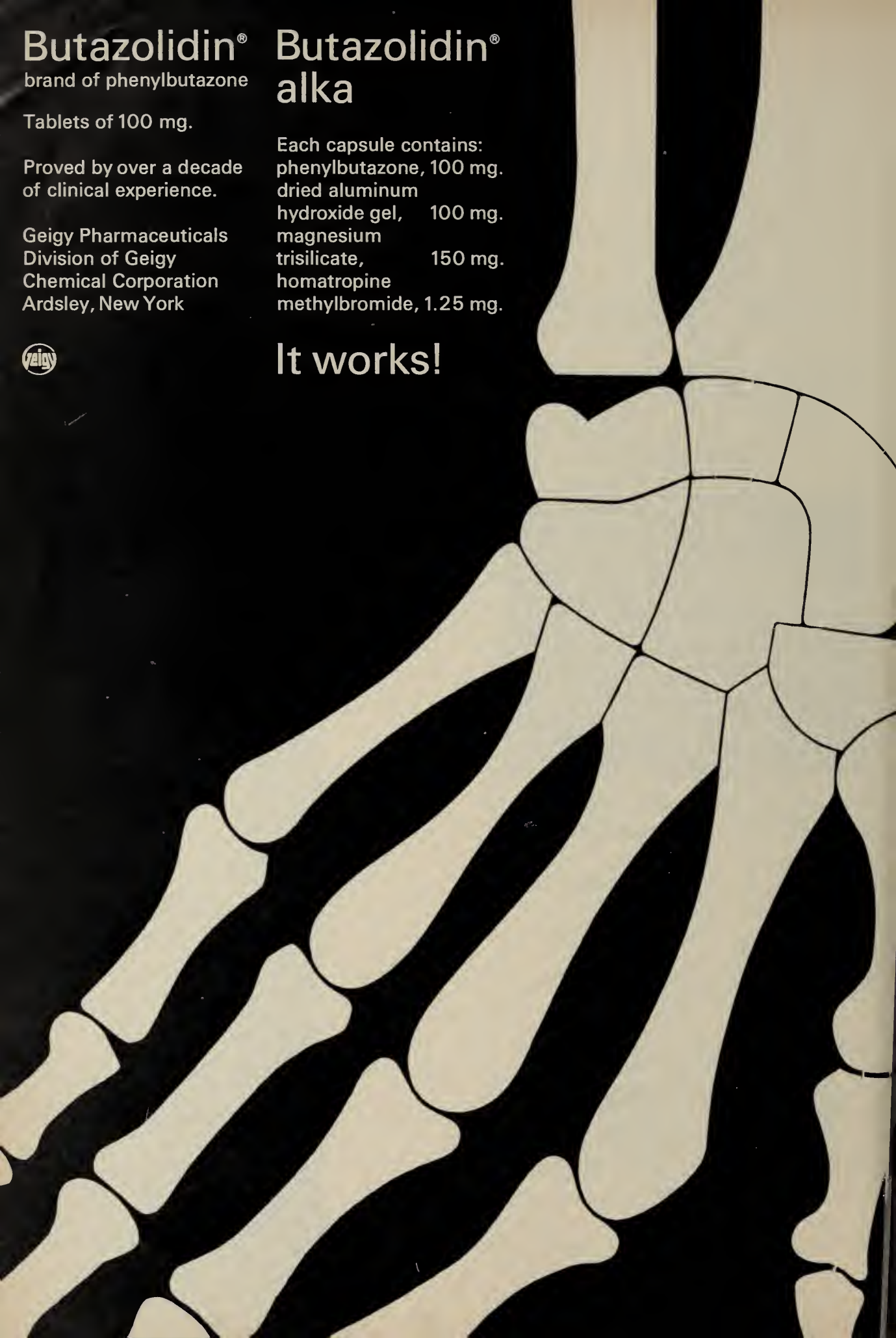
Proved by over a decade of clinical experience.

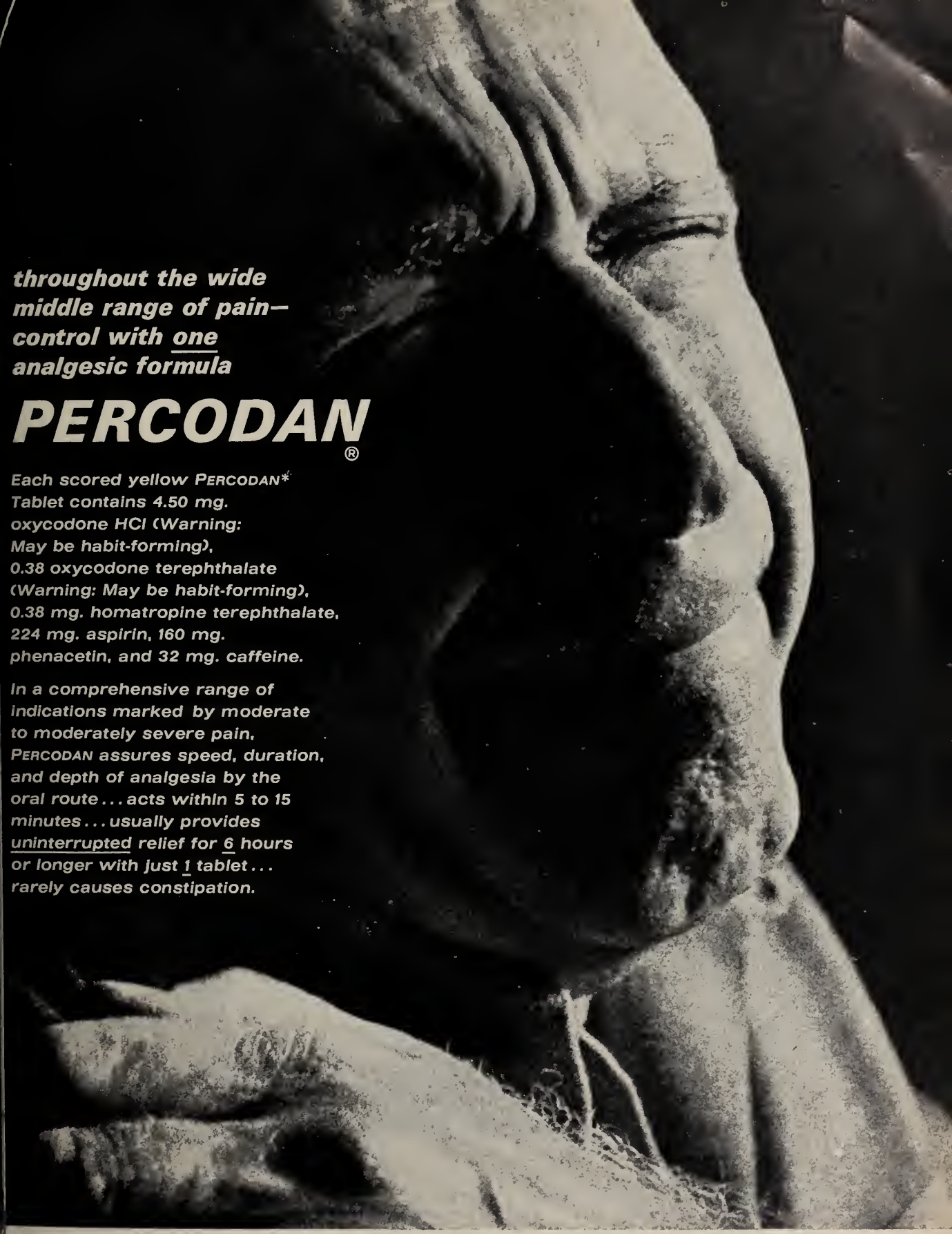
Geigy Pharmaceuticals
Division of Geigy
Chemical Corporation
Ardsley, New York

Butazolidin® alka

Each capsule contains:
phenylbutazone, 100 mg.
dried aluminum hydroxide gel, 100 mg.
magnesium trisilicate, 150 mg.
homatropine methylbromide, 1.25 mg.

It works!





throughout the wide middle range of pain— control with one analgesic formula

PERCODAN®

Each scored yellow PERCODAN* *Tablet contains 4.50 mg. oxycodone HCl (Warning: May be habit-forming), 0.38 oxycodone terephthalate (Warning: May be habit-forming), 0.38 mg. homatropine terephthalate, 224 mg. aspirin, 160 mg. phenacetin, and 32 mg. caffeine.*

In a comprehensive range of indications marked by moderate to moderately severe pain, PERCODAN *assures speed, duration, and depth of analgesia by the oral route... acts within 5 to 15 minutes... usually provides uninterrupted relief for 6 hours or longer with just 1 tablet... rarely causes constipation.*

Average Adult Dose—1 tablet every 6 hours. **Precautions, Side Effects and Contraindications**—The habit-forming potentialities of Percodan are somewhat less than those of morphine and somewhat greater than those of codeine. The usual precautions should be observed as with other opiate analgesics. Although generally well tolerated, Percodan may cause nausea, emesis, or constipation in some patients. Percodan should be used with caution in patients with known idiosyncrasies to aspirin or phenacetin, and in those with blood dyscrasias. **Also available:** Percodan®-Demi, containing the complete Percodan formula but with only half the amount of salts of oxycodone and homatropine. Both products are on oral Rx in all states where laws permit. Narcotic order required. **Literature on request.** **ENDO LABORATORIES Richmond Hill 18, New York**

Endo®

*U. S. Pats. 2,628,185 and 2,907,768



Both the Cream and Ointment rarely sensitize and are bactericidal to virtually all gram-positive and gram-negative organisms found topically, including Pseudomonas aeruginosa and Staphylococcus aureus.

Indications: Wherever infection occurs and is accessible for topical therapy.

Caution: As with other antibiotic preparations, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs.

'NEOSPORIN'® brand
POLYMYXIN B / NEOMYCIN / GRAMICIDIN
ANTIBIOTIC CREAM

Ingredients: Each gram contains: 'Aerosporin'® brand Polymyxin B* Sulfate 10,000 Units; Neomycin Sulfate 5 mg. (equivalent to 3.5 mg. Neomycin Base); Gramicidin 0.25 mg.

In a smooth, white, water-washable vanishing cream base with a pH of approximately 5.0. Inactive ingredients: liquid petrolatum, white petrolatum, distilled water, propylene glycol, polyoxyethylene polyoxypropylene compound, emulsifying wax and 0.25% methylparaben as preservative.

*U.S. Patent Nos. 2,565,057-2,695,261

Available: In 15 Gm. tubes.

'NEOSPORIN'® brand
POLYMYXIN B / BACITRACIN / NEOMYCIN
ANTIBIOTIC OINTMENT

Ingredients: Each gram contains: 'Aerosporin'® brand Polymyxin B Sulfate 5,000 Units; Zinc Bacitracin 400 Units; Neomycin Sulfate 5 mg. (equivalent to 3.5 mg. Neomycin Base).

Available: Tubes of 1 oz., ½ oz. and ⅛ oz.

Complete literature available on request from Professional Services Dept. PML.

BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, N.Y.



ter Surgery: B and C vitamins are therapy

rapeutic amounts of B and C in stress formula vitamins often are vital during periods hysiologic stress. STRESSCAPS, designed to meet increased metabolic demands, in achieving a more comfortable convalescence, a more rapid recovery. After ery, as in many stress conditions, STRESSCAPS vitamins are therapy.

Each capsule contains:

Vitamin B_1 (Thiamine Mononitrate)	10 mg.
Vitamin B_2 (Riboflavin)	10 mg.
Niacinamide	100 mg.
Vitamin C (Ascorbic Acid)	300 mg.
Vitamin B_6 (Pyridoxine HCl)	2 mg.
Vitamin B_{12} Crystalline	4 mcgm.
Calcium Pantothenate	20 mg.

Recommended intake: Adults, 1 capsule daily, for the treatment of vitamin deficiencies. Supplied in decorative "reminder" jars of 30 and 100; bottles of 500.

STRESSCAPS®

Stress Formula Vitamins Lederle

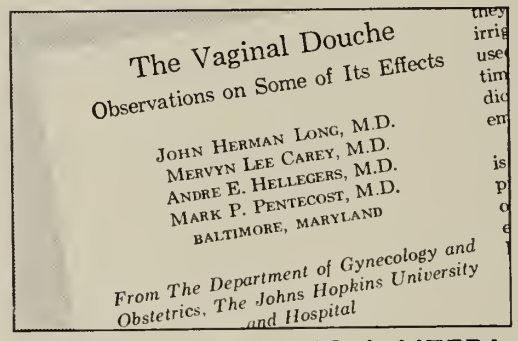
FOR PROFESSIONAL RECOMMENDATION ONLY

derle LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, N. Y.

7282-4

A Valuable Contribution To Medical Literature

A DEFINITIVE STUDY ON DOUCHING



The Vaginal Douche

Observations on Some of Its Effects

JOHN HERMAN LONG, M.D.
MERVYN LEE CAREY, M.D.
ANDRE E. HELLEGERS, M.D.
MARK P. PENTECOST, M.D.
BALTIMORE, MARYLAND

From The Department of Gynecology and Obstetrics, The Johns Hopkins University and Hospital

A SEARCH OF MEDICAL LITERATURE REVEALS NO COMPARABLE OBJECTIVE EVALUATION OF THE SUBJECT.

The authors state at the outset,

"Each physician has his own idea of the value or harm of the vaginal douche and many have expressed such ideas in writing. Such opinions have been arrived at without any intensive investigation or observation of subjects using douches as compared to those not using them. The purpose of this study is to report our observations on three groups of patients, one taking no douches, a second douching with a medicated solution* and a third douching with plain water."[1]

1. West. J. Surg., Obsts. & Gynec.: *71*:122-127, 1963

*The medicinal powder used in this study was META CINE®, a scientifically formulated preparation containing: papain, lactose, citric acid, methyl salicylate, eucalyptol, menthol and chlorothymol.

OBSERVATIONS BASED ON EXTENSIVE AND THOROUGH EXAMINATION SCHEDULE.

"One hundred patients were selected at random, regardless of their chief complaint, from the general population attending the Out-Patient Gynecology Clinic of The Johns Hopkins Hospital. Those selected were reexamined at 1, 3, 6, 9 and 12 months after the initial visit."

"At intervals patients were switched to the regimen of another group so that comparison of the effect of douching or not douching might be made in the same individual."

Three years were required to complete the study.

An evaluation of the objective findings of the study demonstrates that douching with META CINE® had the following effects on vaginal secretion:

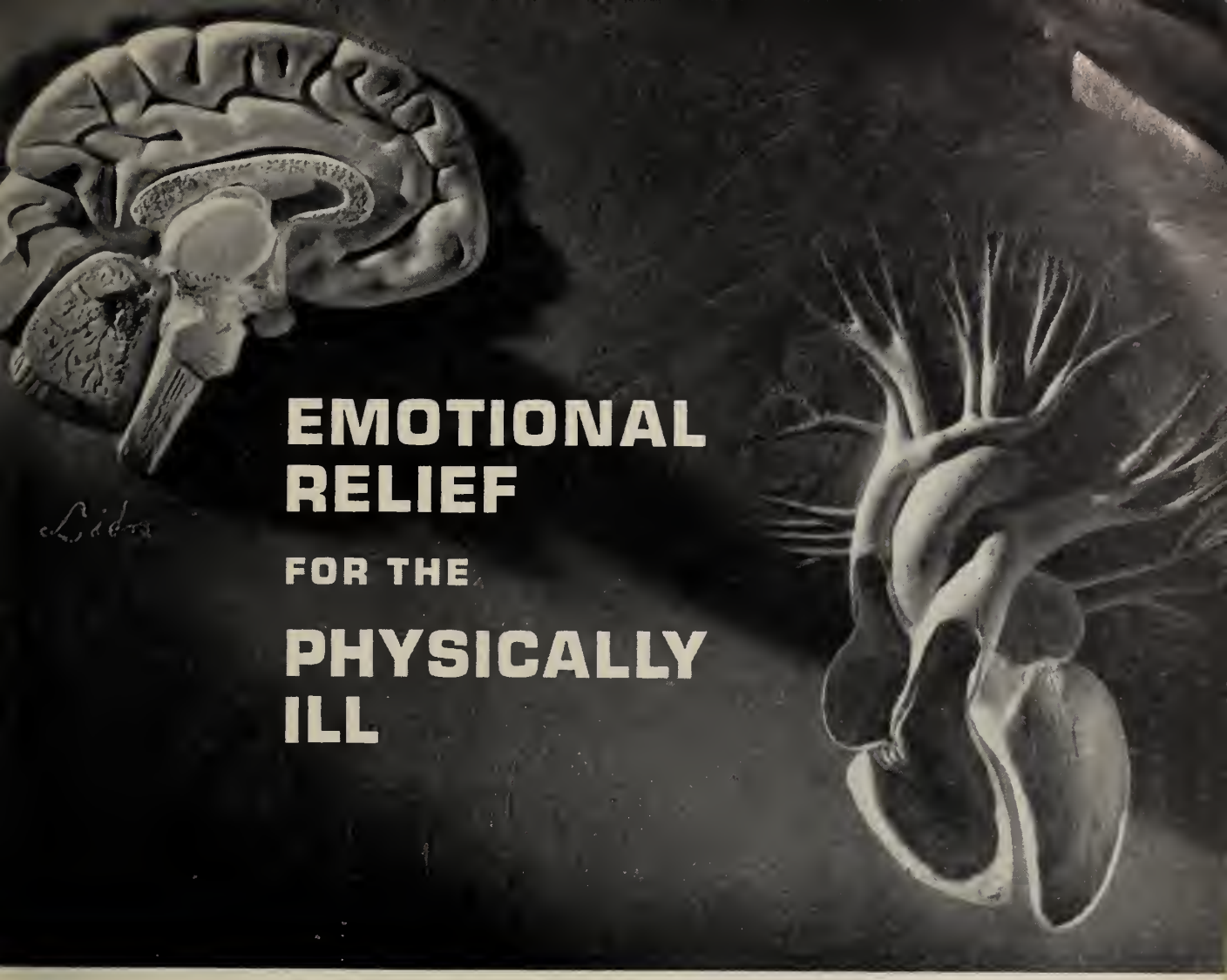
- increased Doderlein organisms,
- proved effective in lowering WBC counts,
- proved effective in increasing glycogen content.

META CINE® was found to be a good antagonist to vaginal discharge and irritation—and also proved effective in reducing cervicitis.

No untoward effects of douching were encountered in the study.

Reprints of the complete study and professional samples of Meta Cine are available on request.

BRAYTEN PHARMACEUTICAL COMPANY • *Chattanooga 9, Tennessee*



RELIEVES ANXIETY, APPREHENSION AND TENSION...



All day long

. . . keeps the patient calm, and the mind clear.



All night too

. . . aids restful sleep, with no barbiturate hangover.

MEPROSPAN®-400

(MEPROBAMATE 400 MG. SUSTAINED RELEASE)

Simplified, convenient dosage for emotional relief.

ide effects: 'Meprospan' (meprobamate, sustained release) ; remarkably free of untoward reactions. Daytime drowsiness as not been reported. Rare allergic or idiosyncratic reactions ıay occur, generally developing after 1-4 doses of the drug.

'ontraindications: Previous allergic or idiosyncratic reactions ɔ meprobamate contraindicate subsequent use.

recautions: Should administration of meprobamate cause rowsiness or visual disturbances, the dose should be reduced.)peration of motor vehicles or machinery or other activity equiring alertness should be avoided if these symptoms are resent. Effects of excessive alcohol may possibly be increased y meprobamate. Prescribe cautiously and in small quantities to patients with suicidal tendencies. Massive overdosage may produce lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction; withdraw gradually after prolonged use at high dosage.

Complete product information available in the product p.:ckage, and to physicians upon request.

Usual adult dosage: One 400 mg. capsule or two 200 mg. capsules at breakfast; repeat with evening meal.

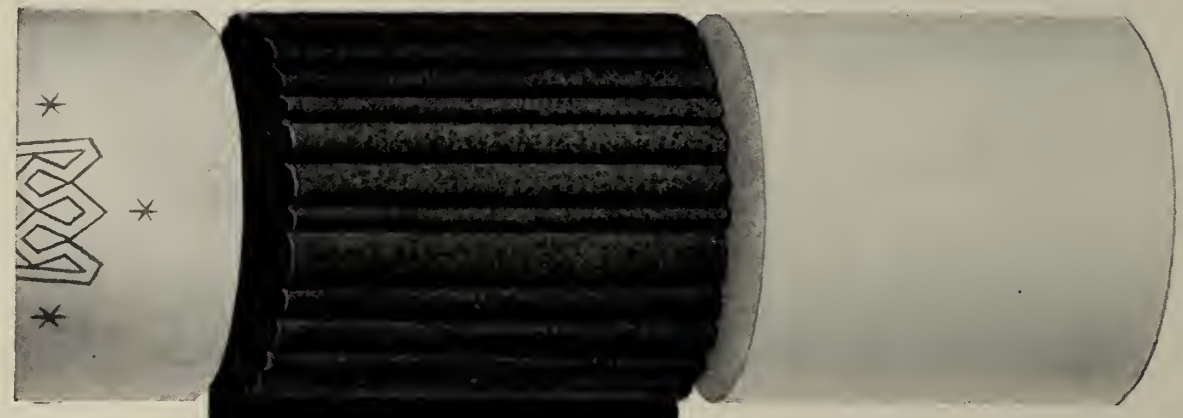
Supplied: 'Meprospan'-400 (meprobamate 400 mg.), 'Meprospan'-200 (meprobamate 200 mg.), each in sustained-release capsules. Both potencies in bottles of 30.

ME-760

WALLACE LABORATORIES *Cranbury, N. J.*

Who developed the first compound charcoal filter?

HERE'S THE ANSWER IN BLACK AND WHITE:



The first cigarette with a modern compound charcoal filter was introduced by The American Tobacco Company in 1958. Its name: Dual Filter Tareyton.

Behind the introduction of this first compound filter lay years of research and experimentation by American Tobacco scientists to produce a filter that would improve the taste and flavor of fine tobacco. This was a large order, but it was filled by the Dual Filter Tareyton compound filter.

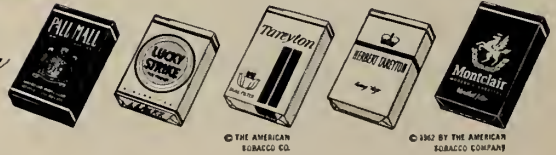
With an outer filter of white cellulose acetate and an inner filter of activated charcoal, this compound filter is just the right complement to Dual Filter Tareyton's quality tobaccos. Proof of its success may be seen in the exceptional loyalty Dual Filter Tareyton smokers have for their brand.

Developing and perfecting the first compound charcoal filter took many years. Maybe this proves something: our persistent dedication to maintaining—and ever improving—the high quality of our products.

For at The American Tobacco Company, QUALITY OF PRODUCT IS ESSENTIAL TO CONTINUING SUCCESS.

The American Tobacco Company

FIRST IN CIGARETTE RESEARCH



© A. T. Co.

© THE AMERICAN TOBACCO CO.

© 1962 BY THE AMERICAN TOBACCO COMPANY



FOR YOUR
ELDERLY
ARTHRITIC
PATIENTS...

an effective
GERIATRIC
antiarthritic
with

REASSURING SAFETY FACTORS

Effectiveness, dependability and reassuring Safety Factors make PABALATE-SF a logical choice for antiarthritic therapy in elderly patients—even when osteoporosis, hypertension, edema, peptic ulcer, cardiac damage, latent chronic infection and other common geriatric conditions are present. The potassium salts of PABALATE-SF cannot contribute to sodium retention... the enteric coating assures gastric tolerance... and clinical experience shows that this preparation does not precipitate the serious reactions often associated with corticosteroids or pyrazolone derivatives.

Side Effects: Occasionally, mild salicylism may occur, but it responds readily to adjustment of dosage. Precaution: In the presence of severe renal impairment, care should be taken to avoid accumulation of salicylate and PABA. Contraindicated: An hypersensitivity to any component.

Also available: PABALATE—when sodium salts are permissible. PABALATE-HC—Pabalate-SF with hydrocortisone.

Pabalate-SF

In each persian-rose enteric-coated tablet: potassium salicylate 0.3 Gm., potassium para-aminobenzoate 0.3 Gm., ascorbic acid 50.0 mg.

—the new, convenient way to prescribe
PABALATE-SODIUM FREE

A. H. ROBINS CO., INC., RICHMOND 20, VIRGINIA

Nashville Surgical Supply Company

The Physician and Hospital's Complete Supply & Service Source

Physicians equipment and supplies

Hospital equipment and supplies

Laboratory equipment and supplies

THE MOST COMPLETE DRUG AND BIOLOGICAL SUPPLY SOURCE IN TENNESSEE

Distributor for Standard and Mattern X-Ray Equipment and Supplies

24-Hour Emergency Service

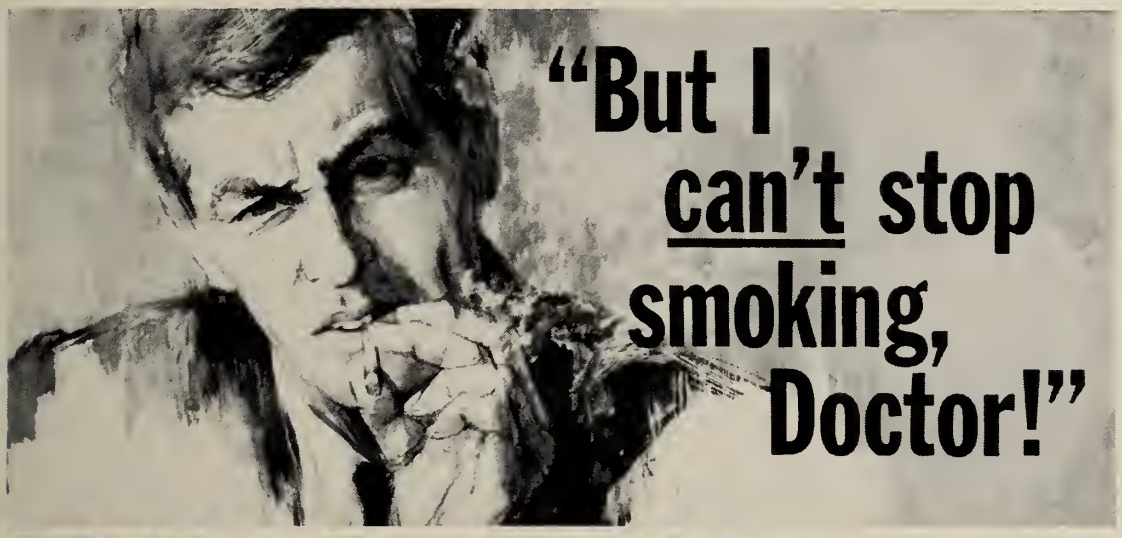
Nashville Surgical Supply Co., Incorporated

1911 Church St.

Nashville, Tennessee

Phone AL 5-4601

When your patient says:



Nikoban® PASTILLES

BRAND OF LOBELINE SULFATE, MRT

help curb the smoking habit

- Help induce a feeling of satiety similar to that of tobacco because of lobeline's pharmacological relationship to nicotine.
- Permit the patient to indulge his oral fixation by substituting the NIKOBAN Pastille for tobacco.
- Utilize the anorexic effect of lobeline to help the patient who is driven to compulsive eating when he discontinues smoking.
- Encourage patient cooperation through pleasant taste.

Dosage and Administration: In order to obtain the maximum benefit, a NIKOBAN Pastille should be sucked slowly and taken according to the schedule below. Whenever possible a pastille should be taken after meals.

1st week: 1 pastille every 1 to 2 hours for a maximum of 12 pastilles daily. *2nd week:* 1 pastille every 3 hours. *3rd week:* 1 pastille every 4 hours. *4th week:* 1 pastille every 4 to 6 hours. *Thereafter* 1 pastille may be taken at infrequent intervals whenever necessary. In some instances there may at first be a slight astringent burr of the tongue and throat. This will usually disappear as treatment with NIKOBAN Pastilles progresses and is no cause for concern.

Caution: It is advisable neither to smoke nor to use a smoking deterrent during pregnancy.

Formulation: Each NIKOBAN Pastille contains 0.5 mg. lobeline sulfate in a pleasant tasting spiced-cherry base.

Availability: In packages of 50 pastilles.

References: 1. Goodman, L. S. and Gilman, A.: The Pharmacological Basis of Therapeutics, New York, Macmillan, 1960, Ed. 2, pp. 620-622; 2. Edmunds, C. W.: J. Pharmacol. and Exper. Therap., 1:27, 1909; 3. Hazard, R. and Savini, E. Gand., 92:471, 1963. 4. Dorsey, J. L.: Ann. Int. Med., 10:628, 1936; 5. Rasmussen, K. B.: Ugeskr.laeger, 118:222, 1956; 6. Ejrup, B.: Sven. lak. Tid., 53:2634, 1956; 7. Jochum, K. and Jost, F.: Munch. med. Wchnschr., 103:618, 1961; 8. Jost, F. and Jochum, K.: Med. Klin., 54:1049, 1959; 9. Smoking and Health, Summary and Report of the Royal College of Physicians of London on Smoking. New York, Pitman, 1962.

M. R. THOMPSON, Inc., Medical Department- BB
711 Fifth Avenue, New York, New York 10022

Gentlemen:
Please send me a trial supply of NIKOBAN Pastilles.

NAME _____ M.D.

ADDRESS _____

CITY _____ ZONE ____ STATE _____

TYPE OF PRACTICE _____

M. R. THOMPSON, INC. • NEW YORK, NEW YORK 10022



YOU:

HISTORY: 20 years of study, plus internship/residency. Substantial investment in professional location, equipment. **SIGNS** and **SYMPTOMS**: Reports that large home, growing family and minimal professional standard of living are a concern. Still ahead—college costs, retirement, natural estate ambitions. **PROGNOSIS**: Needs 15-20 peak years of income to pay off education, home; rear family; retire. All this while battling tough taxes, and without the benefit of social security or company paid life and disability insurance, pension plan. **TREATMENT**: Learn about Mutual Benefit Life's "Seven Significant Benefits". Talk with a M.B.L. representative. See how a built-for-you plan solves specific problems through unique disability clauses, unusually high cash and loan values, liberal survivor income options—and more. Write on your own professional letterhead for exclusive report covering a full range of typical insurance requirements for physicians. Just ask for a copy of *Consultant's Report*.

Those who plan ahead get ahead **MUTUAL BENEFIT LIFE** INSURANCE COMPANY, NEWARK, NEW JERSEY

CARRIER OF YOUR TENNESSEE MEDICAL ASSOCIATION GROUP LIFE INSURANCE PLAN

EDWARD C. DUNN
1104 Sudekum Bldg.
Nashville, Tenn.

SETH W. SIZER
1211 James Bldg.
Chattanooga, Tenn.

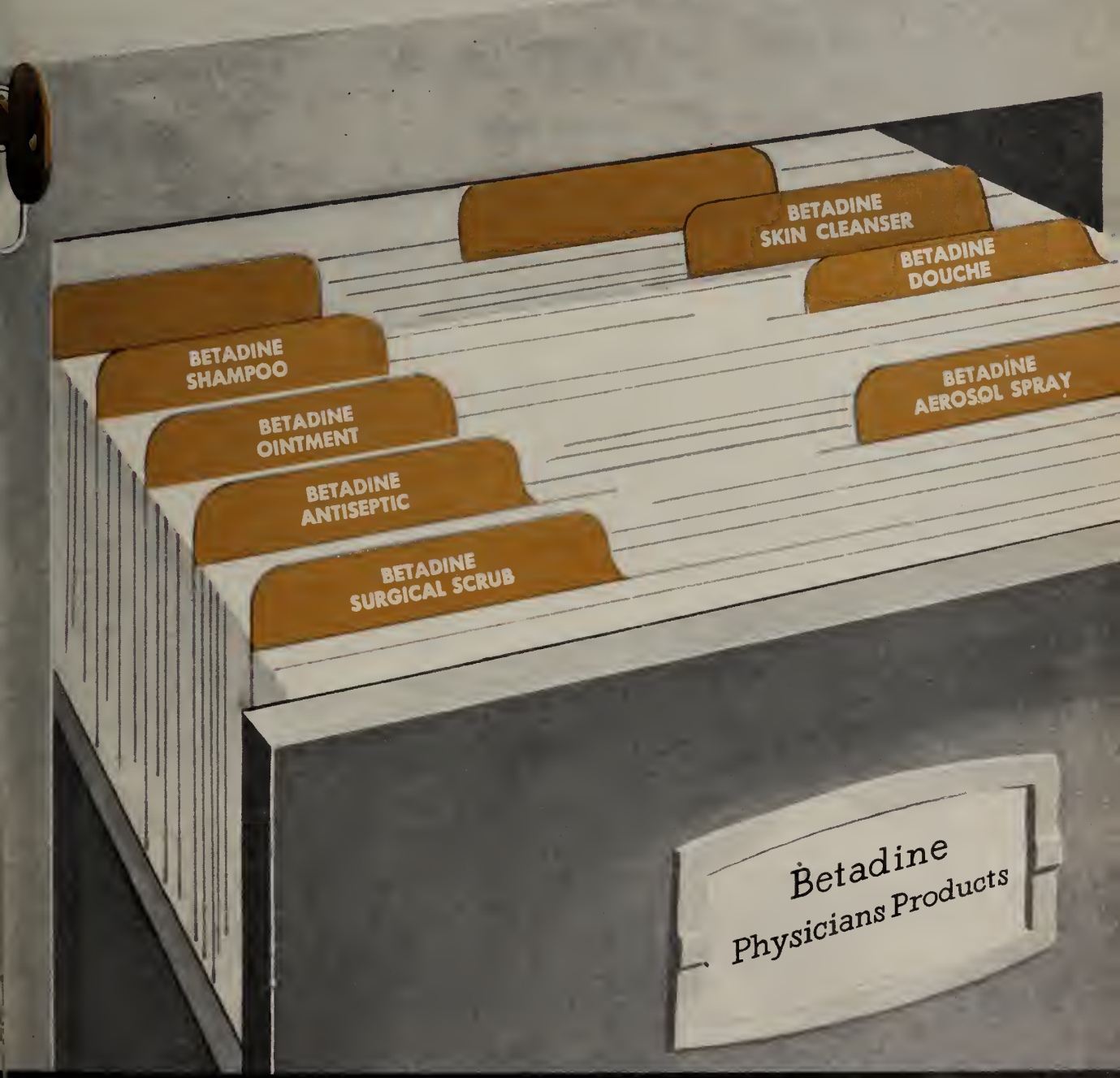
THERON M. LEMLY
1309 Poplar Ave.
Memphis, Tenn.

Betadine®
Povidone-Iodine
Products
unlock a wide range of usefulness

Betadine Products, in all seven dosage forms, contain povidone-iodine, a complex of polyvinylpyrrolidone and iodine, providing all the germicidal properties of elemental iodine . . . yet Betadine (povidone-iodine) is nonirritating, nonsensitizing, and nontoxic to skin or mucosa.

Betadine Products are effective in preventing and treating a variety of infections frequently encountered in the practice of otolaryngology, orthopedics and orthopedic surgery, obstetrics and gynecology, oral surgery, pediatrics, surgery and dermatology.

The clinical results reported under various conditions of use make Betadine (povidone-iodine) preparations valuable adjuncts both in the hospital and in private practice. Literature available upon request.



PHYSICIANS PRODUCTS CO., INC.
PETERSBURG, VIRGINIA



a split hair from perfect...

THESE STAINLESS-STEEL PINS TAKE ON THE APPEARANCE OF TINY FLAMING CANDLES BECAUSE OF THEIR HIGH PO

This pin is 0.00032 of an inch larger than perfect. As a result, it is rejected. ■ Stainless-steel pins like this are used to mold Lilly capsules. From each tray of three hundred new pins, fifty are selected at random. The diameter, length, taper, contour, and finish are carefully measured. If the sensitive electronic measuring devices show an imperfection beyond the hairsplitting limits, the entire tray of three hundred is rejected. ■ Lilly quality control draws the line at ± 0.0003 of an inch for some dimensions and ± 0.0005 of an inch for others. A split hair can mean the difference between perfection and rejection . . . another of the many important controls that add immeasurably to the quality of the finished product.

Eli Lilly and Company • Indianapolis 6, Indiana, U. S. A.

Lilly

400169

Journal of the Tennessee Medical Association
OWNED AND PUBLISHED BY THE ASSOCIATION
Volume 57 MARCH, 1964 Number 3

Carotid Cavernous Fistula*

RICHARD L. DeSAUSSURE, M.D., ROLAND H. MYERS, M.D.,
JAMES C. SIMMONS, M.D., Memphis, Tenn.

The several steps in the treatment of this condition are described as applied in two cases.

The treatment of cavernous carotid fistula has presented a problem through the years and there is still no treatment which is universally effective. The first case is said to have been described by Travers[1] in 1809, though the mechanism was not understood at that time. In 1837, Warraen[2] described the first case produced by trauma; and Sattler,[3] in 1880, described the mechanism as we now believe it to be—that is, an abnormal arteriovenous communication.

A history of trauma can usually be obtained from patients who present with this condition though there are some patients in whom this history is not available. Symptoms may develop immediately or as late as nine months later. Eighty per cent of patients have unilateral symptoms; in the remainder they are bilateral. In 30% of cases the onset is immediate, in 30% the symptoms occur after one week, and in 14% after one month. In the remaining cases the symptoms may occur as late as nine months. Walker[4] has reported an incidence of one case among 20,000 hospital admissions. In his series 14 were traumatic and 10 were spontaneous.

The usual symptoms are bruit, pulsation of the eye, chemosis, diplopia, headache, and visual disturbance. Impairment of vision is a frequent accompaniment of carotid cavernous fistula as the result of damage to the optic nerves at the time of injury; it may also be the result of later trauma from the venous dilatation. Blindness of the affected eye is said to occur in one-third of the cases.

On examination one usually finds pulsating exophthalmos although this is not always present. A bruit is present in most cases which can be heard by the patient and by the examiner. These findings usually make the diagnosis which can be confirmed by an arteriogram. One author states that arteriograms are not necessary, but it is our belief that arteriograms should be done to definitely establish the diagnosis. The differential diagnosis includes orbital encephalocele, cavernous thrombosis (since there is not always a pulsating exophthalmos with carotid cavernous fistula), retro-orbital tumors and vascular orbital tumors, as well as aneurysms.

The usual precipitating factor is trauma. The area of the cavernous sinus is the only place in the body where a major artery passes through venous channels. This area is relatively immobile and any laceration of the artery produces a fistula. There are several hypotheses as to why the symptoms may occur late. One is that an aneurysm may be produced by the trauma, which ruptures later; or there may be a blood clot around the tear in the artery, which is absorbed; or there may be edema of the carotid artery, which is present soon after the trauma, and subsides. Some of the lesions occur as a result of spontaneous aneurysms which rupture in this area.[4]

Case 1. This 63 year old woman entered the hospital with a history of diplopia, said to have been more marked when she looked straight ahead. The past history revealed that about 4 years earlier she had had a sudden episode of vertigo with nausea and vomiting.

Ophthalmologic examination revealed visual acuity of 20/20. Externally the eyes were negative except for extraocular muscle imbalance. There was a 4 prism diopter of right hyperphoria and a 2 prism diopter of exphoria. The diplopia

*Read at the meeting of the Tennessee Academy of Ophthalmology and Otolaryngology, April 8, 1963, Knoxville, Tenn.

was of a vertical type. The spinal fluid was negative. Arteriography was recommended but the patient decided against this.

Seven months later the patient returned giving a history of protrusion of her right eye and occasional headaches. There was still a history of diplopia. She was found to have exophthalmos, but no pulsation nor bruit. Carotid arteriograms demonstrated a carotid cavernous fistula. (Fig. 1.) The internal carotid artery was ligated, but a month later she returned with a recurrence of symptoms. She was operated upon again, and the carotid artery was clipped intracranially.

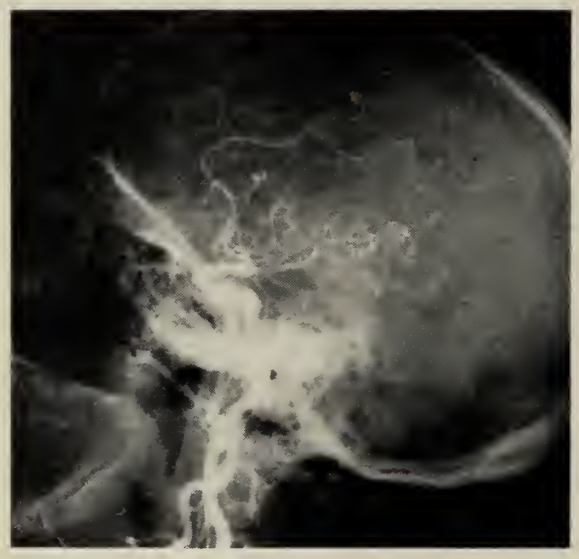


FIG. 1.

Three months later she developed a painful exophthalmus, although there was still no bruit and no pulsation. Arteriograms again demonstrated the carotid cavernous fistula; a month later the ophthalmic artery was ligated intracranially. (Fig. 2.) Subsequently the patient made an excellent recovery.

Case 2. A 42-year-old man was admitted to the hospital with a history of an injury sustained in an automobile accident 4 weeks prior to admission. He had a fracture of his right jaw at the time of the accident. About 4 weeks after the injury he developed diplopia and noticed that his right eye was protruding. He also heard a swishing sound in his head.

He was found to have exophthalmos on the right side with injection of the right eye and a bruit. It was noted that compression of the right carotid artery obliterated the bruit. Arteriograms demonstrated a carotid cavernous fistula in his right eye.

Shortly after the arteriogram, ligation of the internal carotid artery was done under local anesthesia. Twenty-four hours later he became ataxic in his arms, developed weakness of the grip and became more confused. An arteriogram, done 2 days after the carotid ligation, showed cross-filling from the left carotid artery. (Fig. 3.) Therefore an Olivecrona clip was placed intracranially on the carotid artery as it left the carotid sinus. Subsequent to this he showed definite improvement and at the time of discharge he was very much improved.



FIG. 2.

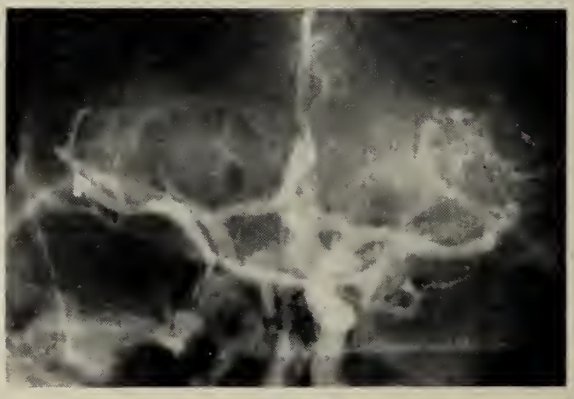


FIG. 3.

Two months later he was admitted to the hospital with conjunctival congestion of his left eye. Arteriograms showed there was still a carotid cavernous communication through the ophthalmic artery. However, he began to improve and the improvement persisted and so no further procedures were carried out.

Discussion

Treatment of this condition is difficult. The usual treatment for an arteriovenous fistula is quadruple ligature with excision of the actual fistula. This, of course, is not possible in carotid cavernous fistula. Carotid ligation has been the most beneficial. One author has recommended the application of cellophane with the idea that gradual occlusion may occur, but this has not proved to be effective. Dandy first recommended a trapping operation. Muscle

plugs have been recommended by Gurdjian, Brooks and Adson. Hamby also has recommended this. However, this is not always effective and has been discarded. Some authors have recommended the administration of gelatin, but this does not invariably effect a cure. In severe cases removal of the eye may be necessary. Martin and Mabon[5] reviewed the literature and reported on the difference in results between ligature of the internal and external carotid arteries and they were negligible. There were 47 cases in which the internal artery was ligated and 25 of these were reported as cured. In 43 cases the common carotid artery was ligated and 30 of these were reported as cured. There were 41 in which multiple extracranial ligations were done and 27 of these were cured.

Another method which has been attempted to effect a cure is repeated digital compression of the carotid artery and this is said to have cured some cases. Echols and Jackson[6] reported that 10% of fistula will cure spontaneously. They believed that perhaps digital compression under hypothermia might be of benefit. He recommended hypothermia to 86 F. (30 C.). In his article he stated, "since there is abundant collateral circulation to the 12 branches of the ophthalmic artery, intracranial ligature of this artery is unlikely to cause blindness." In discussing this paper, however, Botterell[7] told of 2 patients who went blind after the trapping operation. He recommended that the ophthalmic artery be clipped at the same time as the trapping operation to prevent blindness. In discussing Echols' paper further, Galbraith[8] recommended that the intracranial portion of the operation be done first. In one of our patients the carotid ligation was done in the neck and this patient developed a hemiparesis which was actually improved by intracranial clipping of the internal carotid artery. This prevented reflux of blood into the carotid artery from the distant side. In discussing the causes for failure, Hayes[9] called attention to a vessel which was described by Stattin.[10] This vessel apparently arises from the carotid artery in the siphon and runs posteriorly to supply the upper part of the tentorium; it is frequently enlarged with meningiomas of the tentorium. This article also described the blood supply to the dura mater as the middle meningeal artery, the superficial temporal, the occipital artery, the ascending pharyngeal and the accessory meningeal, which is a branch of the maxillary artery and enters through the foramen ovale. The posterior meningeal artery, which is a branch of the ascending pharyngeal, enters through the jugular foramen. The anterior meningeal artery is a branch of the ophthalmic artery. He also called attention to the fact that if a primitive trigeminal artery is present, (found in approximately 2% of arteriograms) the trapping operation will not be effective in achieving a cure. (Figure 4 shows such a persistent trigeminal artery.)



FIG. 4.

In the 2 cases which have been presented, a cure was effected in the first patient by ligature of the internal carotid artery in the neck and subsequent intracranial trapping of the carotid artery intracranially.

In the second patient a cure was finally effected, but it required ligation of the internal carotid artery in the neck, trapping the intracranial portion of the carotid artery and subsequently ligation of the ophthalmic artery.*

Follow-up Note. Following the ligation of the ophthalmic arteries, the exophthalmus and the bulbar congestion have been completely relieved. For a few months she had paresis of the right externus and a small vertical imbalance producing diplopia. Clip-on prisms were prescribed. 1 degree base-down and 1 degree base-up, to

wear before her lens correction. This gave her single binocular vision. When last seen Dec. 3, 1963, visual acuity was as follows:
Right eye: +.25 x 90 = 20/20, minus.
Left eye: +.25 +.50 x 180 = 20/20.
With a +2.50 add, she could read Jaeger 1, each eye.

The following was found on muscle balance. Distance: no lateral, 1 degree esophoria. Near: no lateral, 5 degrees exophoria.

She no longer had diplopia and did not need to wear prisms. The right pupil was one-third dilated and did not react to direct light or consensually. The arterial and venous tree is not as full as that of the left eye, and the disc shows slight palor.

References

1. Travers, Benj. (Quoted by Martin and Mabon.)

2. Warraen. (Quoted by Martin and Mabon.)

3. Sattler. (Quoted by Martin and Mabon.)

4. Walker, A. Earl and Allegre, Georges E.: Carotid Cavernous Fistulas, Surgery 1956.

5. Martin, J. D., Jr. and Mabon, Robert: Pulsating Exophthalmos, JAMA 121:330.

6. Echols, Dean and Jackson, John: Carotid Cavernous Fistula Perplexing Surgical Problem, Neurosurg. 16:619, 1956.

7. Botterell, Harry: Discussion of article by Echols and Jackson.[6]

8. Galbraith, J. Garber: Discussion of article by Echols.[6]

9. Hayes, George J.: External Carotid Cavernous Sinus Fistulas, J. Neurosurg. 20:692, 1963.

10. Stattin, Sture: Meningeal Vessels of the Internal Carotid Artery and Their Angiographic Significance, Acta radiol. 55:329.

PLACEMENT SERVICE

The Placement Service of the Tennessee Medical Association is designed to assist doctors and communities. Further information, and contacts to both physicians and communities, is available from the Public Service Office, 112 Louise Avenue, Nashville, Tennessee—phone 291-4584.

Locations Wanted

DERMATOLOGIST, 30 years of age, graduate of the University of Texas Medical Division, would like clinical or associate practice with part-time teaching, in any town in West Tennessee. Married. Episcopalian. Available immediately. LW-447

◆

GENERAL PRACTITIONER, 43 years of age, graduate of the Medical College of Georgia, would like to establish either solo or associate practice in any city in Tennessee. Extensive residency training. Now in private practice. Married. Presbyterian. Available immediately. LW-472

◆

UROLOGIST, 30 years of age, graduate of the Tulane University School of Medicine, would like clinical or associate practice in Middle Tennessee area of 2,000 to 65,000. Married. Protestant. Available upon completion of residency, July 1964. LW-497

◆

UROLOGIST, 31 years of age, graduate of the University of Virginia, would like to establish clinical, assistant, associate, or institutional practice in East or Middle Tennessee city of 25,000 plus. Married. Baptist. Now in residency. Available July 1964. LW-488

◆

ORTHOPEDIC-SURGEON, 30 years of age, now in residency, would like to establish associate or solo practice in any town in Middle or East Tennessee with 15,000 to 150,000 population. Graduate of the Tulane School of Medicine. Married. Protestant. Available immediately. LW-492

◆

GENERAL PRACTITIONER, 42 years of age, graduate of Oklahoma School of Medicine, would like assistant, clinical, industrial, or insurance practice in any size community, any area of Tennessee. Now in private practice but would like to relocate in a state offering better educational opportunities. Married. Protestant. Available 30 days notice. LW-493

◆

INTERNIST, 31 years of age, graduate of the University of Tennessee College of Medicine, would like associate, assistant or clinical practice in any city in Middle Tennessee with 40,000 plus population. Married. Catholic. Tennessee license. Residency. Now in military service. Available 30 days. LW-494

◆

GENERAL SURGEON, 48 years of age, and his wife who is an Internist and Anesthesiologist, would like associate, assistant, clinical, industrial or institutional practice in any locality of Tennessee. Both are graduates of the Medical Evangelists College in California. Residency. Seventh Day Adventists. Available anytime. LW-495

◆

ANESTHESIOLOGIST, 42 years of age, graduate of the Medical College of Madrid, Spain, would like assistant, associate or group practice in any large city of East Tennessee. Extensive residency. Available immediately. LW-496

◆

GENERAL SURGEON, 30 years of age, Board eligible, graduate of the University of Tennessee College of Medicine, would like assistant, associate, or solo practice in any size city of West Tennessee. Married. Protestant. Tennessee license. Available upon completion of residency, July 1964. LW-497

(Continued on page 120)

ANNOUNCING

129th annual meeting

PROGRAM

april 12-13-14-15 1964

MEMPHIS

Tennessee Medical Association

Plan To Attend!

FEATURING

* An outstatnding program of interest to physicians in all areas of medical practice.
* Technical exhibits.
* 17 Specialty Society Meetings
* Presidents' Banquet and Dinner Dance.

LUNCHEONS & BANQUET TICKETS

REQUEST FOR RESERVATION OF SPECIALTY SOCIETY LUNCHEON TICKETS

Please reserve_____luncheon tickets for the meeting

of the_____
Name of Specialty Society

for April_____
Date and Day

Reserve_____tickets for the TMA Presidents' Banquet and Dance on Monday Evening, April 13.

Name:_____

Address:_____

_____

Send to Tennessee Medical Association, 112 Louise Ave., Nashville 3, Tenn.

Welcome.....

Annual Meeting

TENNESSEE MEDICAL ASSOCIATION

FROM THE LOBBY . . . to the SKYWAY . . . we all wish you a most successful and pleasurable meeting.

ENJOY the delicious food in these fine restaurants . . . all in the Peabody:

- ★ COLONIAL ROOM for breakfast and luncheon
- ★ CYPRESS ROOM for breakfast, luncheon and dinner
- ★ PEABODY GRILL for snacks (open around the clock)
- ★ CARNIVAL ROOM for beverages
- ★ THE SKYWAY for dining and dancing nightly to nationally famous orchestras

HAVE A GOOD STAY and make Hotel Peabody your headquarters whenever you are in Memphis.



HOTEL PEABODY

The South's Finest *One of America's Best*

Memphis, Tennessee

Special Section

SCIENTIFIC PROGRAM OF THE 129TH ANNUAL MEETING OF THE TENNESSEE MEDICAL ASSOCIATION

General Information

► The official program contains detailed information on the 1964 Annual Meeting of the Tennessee Medical Association, conducted in Memphis, Tennessee, April 12-15, 1964.

► *Registration*

The registration desk will be located on the lobby floor of the Peabody Hotel, Memphis. All members, visiting speakers, interns, residents, exhibitors and guests are urged to register. Admission to all meetings and sessions and to the exhibits is by a badge secured at the registration desk. *THERE IS NO REGISTRATION FEE.*

Programs for all activities during the annual meeting are available at the registration desk. Those eligible to register are: Members of the Tennessee Medical Association; physicians from other states who are members of their respective State Medical Association; residents, interns, medical students and guests.

Miss Willard Batey
Chief Registrar

► *Registration Hours* (All times are Central Standard Time)

Sunday, April 12	9:00 A.M. (Special registration for members of the House of Delegates from 9:00 A.M. to 1:00 P.M.) Advance registration for exhibitors and early arrivals will be conducted from 2:00 P.M. to 5:00 P.M.
Monday, April 13	8:00 A.M. to 5:00 P.M.
Tuesday, April 14	8:00 A.M. to 5:00 P.M.
Wednesday, April 15	8:00 A.M. to 12:00 Noon

► *Annual Meeting Headquarters*

Headquarters are located in the Peabody Hotel, Memphis, where many activities are scheduled. The majority of the specialty societies will conduct their meetings concurrently with TMA in the Peabody. Specialty societies meeting outside of the Peabody are listed elsewhere in this program under the days that the societies are to meet.

► *TMA Headquarters Office*

Rooms 202-203 in the Peabody Hotel will be the Headquarters Office of TMA during the meeting. A member of the staff will be available to assist you at all times. Members of the House of Delegates, Officers, and Reference Committee Chairmen can secure secretarial help when needed. Your headquarters staff is available to assist you in your needs.

J. E. Ballentine, *Executive Director*
L. Hadley Williams, *Public Service Director*
Miss Willard Batey, *Records and Bookkeeping*
Mrs. Doris Darrow, *Secretary*
Miss Sarah Baggett, *Secretary*
Mrs. Jean Ragsdale, *Secretary*

► *President's Banquet and Social Hour*

The President's Banquet will be preceded by a Social Hour sponsored by the Tennessee Medical Association, beginning at 6:00 P.M. on Monday evening, April 13, in the Venetian Room of the Peabody Hotel.

The Banquet will follow at 7:00 P.M. in the Continental Ballroom of the Peabody. Tickets are available at the registration desk. A limited number can be accommodated. *GET YOUR TICKETS EARLY.*

► *Message Center—Emergency Telephones Memphis 527-4963 and 527-4043*

A blackboard will be placed immediately in front of the elevators on the mezzanine floor where doctors' calls will be listed. *PLEASE CHECK OFTEN WITH THE LISTINGS ON THE CALL BOARD.*

► *Specialty Society Luncheon Tickets*

Tickets to specialty society banquets and luncheons, as well as the Woman's Auxiliary affairs, can be obtained from their respective registration desks. *PURCHASE YOUR TICKETS AT THE TIME OF REGISTRATION.* The number that can be accommodated is limited.

► *Woman's Auxiliary*

The Woman's Auxiliary to TMA will conduct all sessions of its Annual Meeting in the Claridge Hotel. The registration desk for the Auxiliary will be located in the Claridge Hotel and all committee meetings, board meetings and general sessions will be conducted at the Claridge.

► *House of Delegates*

The first session of the House of Delegates will be held on Sunday, April 12, beginning at 1:00 P.M. in the Georgian Room of the Peabody Hotel. The second session will be conducted on Tuesday, April 14, beginning at 9:00 A.M. in the Georgian Room of the Peabody Hotel.

► *Scientific Meetings*

The scientific presentations at the 129th annual meeting will be those presented by the specialty societies meeting concurrently with the Tennessee

Medical Association. Please see the Program listing the scientific meetings of the specialty societies each day. Every member attending is welcome to attend any scientific meeting of any specialty society.

► *Specialty Societies*

Seventeen specialty societies are conducting their meetings concurrently with the Tennessee Medical Association in Memphis. Scientific and business sessions of the specialty societies will be conducted on April 12-13-14-15. *SEE DETAILS IN THIS PROGRAM LISTED UNDER EACH OF ABOVE DATES AND UNDER "ANNOUNCEMENTS."*

► *Scientific Exhibitors*

Several scientific and educational exhibits will be presented. These will be displayed on the Mezzanine Floor of the Peabody Hotel.

► *Technical Exhibitors*

The technical exhibitors will be located in the Lobby and on the Mezzanine Floor of the Peabody Hotel. They may be visited each day of the annual meeting, beginning on Monday, April 13, from 9:00 A.M. until 5:00 P.M. — and ending on Wednesday, April 15, at 12:00 Noon. The exhibitors are an important part of the 129th Annual Meeting and each physician will be well repaid by spending time visiting them and inspecting their exhibits. The exhibits will display many educational features of medical supply and the scientific world.



ANNOUNCEMENTS—

SPECIAL MEETINGS AND EVENTS

President's Banquet
Peabody Hotel
Continental Ballroom
Monday, April 13—7:00 P.M.
Social Hour—6:00 P.M. (Venetian Room)
Peabody Hotel

Sponsored by TMA

Bland W. Cannon, M.D., President, Presiding
Subject: "Identification"
Introduction of President-Elect—
R. H. Kampmeier, M.D.
Special Awards:
Presenting Tennessee's Outstanding Physician of the Year—By: J. Malcolm Aste, M.D., Speaker of the House of Delegates
Presenting Health Project Contest Winner—By: R. M. Finks, M.D., Chairman, Board of Trustees and Treasurer

Woman's Auxiliary to the Tennessee Medical Association
April 12-13-14, 1964
Claridge Hotel
Hospitality—Aztek Room

Registration

Sunday, April 12—2:00 P.M.-4:00 P.M.
Monday, April 13—8:00 A.M.-12:30 P.M.
Tuesday, April 14—8:00 A.M.-11:00 A.M.

Complete details and schedule of events and meetings of the Woman's Auxiliary are listed in this program under the days they will occur, Sunday, Monday and Tuesday.

Arts and Crafts Exhibit

The Arts and Crafts Exhibit of the Woman's Auxiliary will be conducted in the Claridge Hotel, Aztek Room. Doctors and their wives are urged to participate in the exhibit.

Tennessee Medical Association Scientific Exhibits

All scientific exhibits presented will be displayed in the Peabody Hotel, Mezzanine Floor.

Technical Exhibits

The technical exhibits are located in the Lobby and on the Mezzanine Floor of the Peabody. They are open daily at 9:00 A.M. The exhibits display many educational features of the medical supply world which should be of interest to doctors.

TMA Board of Trustees Meeting

The TMA Board of Trustees will meet in Room 214 of the Peabody Hotel at 9:00 A.M. on Wednesday, April 15.

Public Health Council

The Public Health Council will meet in Room 303-07 of the Peabody Hotel at 10:00 A.M., Monday, April 13.

Tennessee Academy of Ophthalmology & Otolaryngology

Meetings of the Tennessee Academy of Ophthalmology and Otolaryngology will be conducted on Monday and Tuesday, April 13-14, beginning at 9:00 A.M. The meetings will be conducted in the Downtowner Motor Inn, 162 Union Avenue, (Terrace 60), Memphis. (Across from Peabody Hotel.)

Tennessee State Obstetrical and Gynecological Society

The Society's banquet will be held on Saturday Evening, April 11th. (Place to be announced.)
The scientific program will be presented on Monday, April 13, beginning at 9:00 A.M. in the Peabody Hotel.

Tennessee District Branch— American Psychiatric Association

This specialty society meeting will be conducted on Tuesday, April 14, in the Tennessee Psychiatric Hospital and Institute, located at 865 Poplar Avenue, Memphis.

Tennessee State Orthopaedic Society

The Society has planned an interesting and entertaining meeting which will include recreation and scientific education.

On Saturday Evening, April 11, the Society's Buffet Dinner Dance will be held at 7:00 P.M. in the University Club Ballroom. (Members only) Tickets may be purchased at the door.

On Sunday, April 12, the Members Luncheon will be held in Room 213 of the Peabody at 12:00 Noon.

The Luncheon for the Ladies will be presented in the Downtowner Motor Inn, Flame Room, (across from the Peabody) on Sunday, April 12 at 12:30 P.M. Tickets may be purchased at the door.

On Sunday, Evening, April 12, the President, Dr. A. J. Ingram, will entertain members in his home at 1613 Peabody Street, Memphis, from 6:00 to 8:00 P.M.

The scientific program will begin at 9:00 A.M. on Sunday April 12 in Room 200 of the Peabody Hotel.

Please Reserve Luncheon Tickets Early

A number of the specialty societies meeting with TMA will sponsor luncheons during the annual meeting.

PLEASE MAKE RESERVATIONS FOR LUNCHEONS YOU ARE PLANNING TO ATTEND.

These should be made with the secretary of the specialty society.

Tennessee Chapter—American College of Surgeons

The Tennessee Chapter of the American College of Surgeons announces that Dr. Kenneth McFarland, Guest Lecturer of General Motors Corporation and considered America's foremost public speaker, will be the dinner speaker for the Society on Tuesday evening, April 14. *TMA MEMBERS AND GUESTS ARE INVITED TO THE BANQUET AND TO HEAR DR. McFARLAND. MAKE YOUR RESERVATIONS EARLY. Tickets at Registration Desk.*

Impact Breakfast

7:15 A.M.

Tuesday, April 14, 1964

Venetian Room **Peabody Hotel**

(Tickets on sale adjacent to Registration desk)

Tennessee physicians and their wives invited to attend.

8:00 A.M.
PROGRAM

Guest Speaker: Congressman Joel T. Broyhill, (Virginia) Member of the House Ways and Means Committee.

The breakfast is sponsored by Independent Medicine's Political Action Committee—Tennessee.

—You will want to attend—

NOTICE

The scientific presentations of all of the specialty societies meeting concurrently with the Tennessee Medical Association, are open to all physicians registered at the annual meeting. Attend the meeting of your choice.

Technical Exhibits

Technical exhibits for the 1964 Annual Meeting will be displayed on the LOBBY and MEZZANINE FLOORS of the Peabody Hotel. The newest developments in pharmaceuticals, equipment and services will be on display, with full information available through trained and experienced representatives.

Exhibits will be open Monday, April 13 through Wednesday, April 15, from 9:00 A.M. until 5:00 P.M. Exhibits will close Wednesday at 12:00 Noon. All physicians will find their time well spent in visiting exhibits and keeping abreast of what is new and useful. *YOUR ATTENDANCE IS URGED,* for your benefit as well as for an expression of cooperation with our exhibitors.

ABBOTT LABORATORIES North Chicago, Illinois	Mezzanine Booth 45
ASTRA PHARMACEUTICAL PRODUCTS, INC. Worcester, Massachusetts	Mezzanine Booth 22
THE BIRTCHER CORPORATION Los Angeles, California	Main Lobby Booth 5
R. C. BURLEIGH ASSOCIATES, INC. Memphis, Tennessee	Mezzanine Booth 44
CIBA PHARMACEUTICAL COMPANY Summit, New Jersey	Main Lobby Booth 10
THE COCA-COLA COMPANY Atlanta, Georgia	Mezzanine Booth 37
DAIRY COUNCILS OF TENNESSEE Bristol, Chattanooga, Knoxville, Memphis, Nashville	Mezzanine Booth 29
DOME CHEMICALS, INC. New York, New York	Mezzanine Booth 48
THOS. A. EDISON INDUSTRIES Nashville, Tennessee	Main Lobby Booth 7
ELI LILLY AND COMPANY Indianapolis, Indiana	Main Lobby Booth 3
THE EMKO COMPANY St. Louis, Missouri	Mezzanine Booth 58
ENCYCLOPAEDIA BRITANNICA Chicago, Illinois	Main Lobby Booth 12
GEIGY PHARMACEUTICALS Yonkers, New York	Main Lobby Booth 6
GREAT BOOKS OF THE WESTERN WORLD Chicago, Illinois	Mezzanine Booth 56
KAY SURGICAL, INC. Memphis, Tennessee	Mezzanine Booth 21
THE LANIER COMPANY Atlanta, Georgia	Mezzanine Booth 38
LEDERLE LABORATORIES Pearl River, New York	Main Lobby Booth 16
J. A. MAJORS COMPANY Dallas, Texas	Main Lobby Booth 4
MEDICAL SOCIETY RETIREMENT PLAN (Denby Brandon Company) Memphis, Tennessee	Mezzanine Booth 41
MEMPHIS AERO CORPORATION Memphis, Tennessee	Mezzanine Booth 35
MERCK, SHARP & DOHME West Point, Pennsylvania	Mezzanine Booth 54

MUTUAL BENEFIT LIFE INSURANCE CO. (Dunn-Lemly-Sizer) Nashville, Tennessee	Mezzanine Booth 55
ORGANON, INC. West Orange, New Jersey	Main Lobby Booth 13
PARKE, DAVIS & COMPANY Detroit, Michigan	Mezzanine Booth 28
PFIZER LABORATORIES New York, New York	Mezzanine Booth 53
PHYSICIAN'S MUTUAL INSURANCE CO. Nashville, Tennessee	Mezzanine Booth 24
WM. P. POYTHRESS & COMPANY, INC. Richmond, Virginia	Mezzanine Booth 34
PROVIDENT PHARMACEUTICALS, INC. Chattanooga, Tennessee	Mezzanine Booth 26
RAMAR HEALTH PRODUCTS Athens, Alabama	Main Lobby Booth 9
SANDOZ PHARMACEUTICALS Hanover, New Jersey	Mezzanine Booth 50
SCHERING CORPORATION Union, New Jersey	Mezzanine Booth 49
G. D. SEARLE & CO. Chicago, Illinois	Main Lobby Booth 15
SHERMAN LABORATORIES Detroit, Michigan	Mezzanine Booth 52
SMITH, REED, THOMPSON & ELLIS CO. Nashville, Tennessee	Mezzanine Booth 59
E. R. SQUIBB & SONS New York, New York	Mezzanine Booth 47
SYNTEX LABORATORIES, INC. Palo Alto, California	Mezzanine Booth 32
TENNESSEE GUILD OF DISPENSING OPTICIANS	Mezzanine Booth 27
TMA PROFESSIONAL LIABILITY INS. (Malpractice) Farringer & Company	Mezzanine Booth 42
THE UPJOHN CO. Kalamazoo, Michigan	Main Lobby Booth 11
U. S. VITAMIN & PHARMACEUTICAL CORP. New York, New York	Mezzanine Booth 51
VOGEL-X-RAY CO. Memphis, Tennessee	Main Lobby Booth 14
WALLACE LABORATORIES Cranbury, New Jersey	Mezzanine Booth 46

VISIT THE EXHIBITORS

The scientific meetings will be recessed during each day to give doctors an opportunity to visit the exhibitors.

J. E. Ballentine,
Executive Director

☆

PROGRAM

Sunday, April 12, 1964

1:00 P.M. (C.S.T.)

House of Delegates, Georgian Room

Peabody Hotel—Memphis

SPECIALTY SOCIETIES

MORNING

TENNESSEE STATE ORTHOPAEDIC SOCIETY

ENTERTAINMENT PROGRAM

(Saturday evening—April 11, 1964)

Buffet Dinner—Dance (Members Only)
University Club Ballroom
(Purchase tickets at door.) ..... 7:00 P.M.

Sunday, April 12, 1964

Luncheon for Ladies
Downtowner's Flame Room
(across from Peabody)
160 Union Avenue
(Purchase tickets at door.) ..... 12:30 P.M.

Members Luncheon
Peabody Hotel, Room 213 ..... 12:00 Noon

President's Entertainment
Home of Dr. and Mrs. Alvin J. Ingram
1613 Peabody Street ..... 6:00-8:00 P.M.

OFFICERS

Alvin J. Ingram, M.D., *President*
Wendell L. Whittemore, M.D., *Vice-President*
Lee Milford, M.D., *Secretary-Treasurer*

SCIENTIFIC PROGRAM

Sunday, April 12, 1964
Room 200—Peabody Hotel

GUEST SPEAKER

Don H. O'Donoghue, M.D.
Professor of Orthopaedics and
Chief of Department of Orthopaedic Surgery,
University of Oklahoma

9:00 A.M.

Registration for State Medical Association and Orthopaedic Section, Lobby, Peabody Hotel (No Registration Fee)

9:30 A.M.

Welcome by President—Alvin J. Ingram, M.D.

9:40 A.M.

Business Meeting

10:25 A.M.

Intermission

10:30 A.M.

"Bone Cyst Successfully Treated Following Calcium Sulfate Implants"

By: John J. Killeffer, M.D., Chattanooga

10:45 A.M.

"Dislocation of the Head of the Fibula"

By: George B. Higley, Jr., M.D., Memphis

11:05 A.M.

"Osteochondral Fractures"

By: Don H. O'Donoghue, M.D. (Guest Speaker)

12:00 Noon

Luncheon—Room 213, Peabody Hotel

1:30 P.M.

"Long Term Followup of Grice Operations"

By: Jerry C. Hunt, M.D., Nashville
(By Invitation)

2:00 P.M.

"Subastragular Arthrodesis"

By: JOHN R. GLOVER, M.D., Nashville

(Intermission)

2:30 P.M.

"Current Treatment of Ligamentous Injuries of the Knee"

By: DON H. O'DONOGHUE, M.D.

(Intermission)

3:40 P.M.

"Current Program of Orthopaedics Overseas"

By: PAUL E. SPRAY, M.D., Oak Ridge

4:10 P.M.

"End Result Studies of Hip Prostheses"

By: LEWIS D. ANDERSON, M.D., Memphis

4:40 P.M.

"A Fresh Look at Morton's Neuroma"

By: JACK H. BOOTH, M.D., and ROBERT J. SMITH, M.D., Jackson

☆

TENNESSEE STATE SOCIETY OF ANESTHESIOLOGISTS

Sunday, April 12, 1964
Peabody Hotel
Room 216

10:00 A.M.

Business Meeting and Election of Officers

12:00 Noon

Luncheon—Room 214, Peabody Hotel

SCIENTIFIC PROGRAM

1:30 P.M.

Room 216

"Cardiac Pacemakers"

By: ROBERT G. ALLEN, M.D.
Department of Surgery, LeBonheur Children's Hospital, Memphis

AFTERNOON

☆

WOMAN'S AUXILIARY TO THE TENNESSEE MEDICAL ASSOCIATION

April 12-14, 1964
CONVENTION HEADQUARTERS
CLARIDGE HOTEL

* * * * *

36th Annual Convention

* * * * *

Sunday, April 12
2:00 P.M.-4:00 P.M. Registration
CLARIDGE HOTEL

2:00 P.M.-4:00 P.M.

Special Committee Meetings (Awards, Finance, Revisions)—President's Suite, Room 1526, Claridge Hotel

2:00 P.M.-5:00 P.M.

Entries accepted for Arts and Crafts Show in Aztek Room

Hostess Auxiliary
The Woman's Auxiliary of the Memphis and Shelby County Medical Society

Monday, April 13, 1964

SPECIALTY SOCIETIES

MORNING

TENNESSEE ACADEMY OF GENERAL PRACTICE

MONDAY, APRIL 13, 1964

SCIENTIFIC PROGRAM

(Category I Credit Approved)
TAGP Members—(3 hours)

Continental Ballroom **Peabody Hotel**

9:00 A.M.

Moderator: GEORGE L. PERLER, M.D., Nashville, Chairman, Scientific Program Committee

"Surgery and the Geriatric Patient"

By: GLENN M. CLARK, M.D.—Professor of Medicine, University of Tennessee College of Medicine, Chief of Staff, City of Memphis Hospitals.

9:30 A.M.

BENJAMIN F. BYRD, JR., M.D., F.A.C.S.—Associate Clinical Professor of Surgery, Vanderbilt University School of Medicine, Nashville.

Question and Answer Period

10:30 A.M.

Intermission—Visit Exhibitors

11:00 A.M.

"The Nutritional Anemias"

By: ROBERT F. SCHILLING, M.D.—Associate Professor of Medicine, University of Wisconsin, University Hospitals, Madison, Wisconsin

Question and Answer Period

(Acceptable for 3 (three) Accredited Hours, TAGP Members)

☆

TENNESSEE ACADEMY OF OPHTHALMOLOGY AND OTOLARYNGOLOGY

MONDAY, APRIL 13, 1964

Downtowner Motor Inn, 162 Union Ave. (Terrace 60), Memphis

Please Visit the Exhibitors

SCIENTIFIC PROGRAM

8:50 A.M.

Meeting called to order—
WILLIAM MURRAH, M.D., President

9:00 A.M.

"A-V Syndrome"

By: I. LEE ARNOLD, M.D., Chattanooga

9:20 A.M.

"Ophthalmological Use of Mannitol"

By: FRANK L. SEEGER, M.D. and PHILIP M. LEWIS, M.D., Memphis

9:40 A.M.

"Branch Occlusion of Central Retinal Vein"

By: LEONARD BERG, M.D. and GEORGE W. BOUNDS, JR., M.D., Nashville

10:00 A.M.
(Intermission)

10:09 A.M.
"Current Surgical Therapy for Meniere's Disease"
By: David F. Austin, M.D. and George R. Hart, M.D., Memphis

10:30 A.M.
"Technique and Treatment of Head and Neck Tumors by Temporal Artery Infusion"
By: Davis R. Watson, M.D., Memphis

10:50 A.M.
"The Surgical Treatment of Acute Frontal Sinusitis"
By: Michael Glasscock, M.D., Memphis

11:15 A.M.
Business Meeting

12:15 P.M.
LUNCHEON

1:00 P.M.
Round Table Discussion

TENNESSEE OBSTETRICAL AND GYNECOLOGICAL SOCIETY

MONDAY, APRIL 13, 1964

Georgian Room **Peabody Hotel**
(Luncheon—Venetian Room, Peabody)

SCIENTIFIC PROGRAM

9:00 A.M.
"Mammeography"
By: Hollis Halford, M.D., Radiologist, Methodist Hospital, Memphis

9:30 A.M.
Subject to be announced.
By: Willis Brown, M.D., Professor of Ob-Gyn, University of Arkansas Medical School

10:00 A.M.
"Carcinoma of Cervix Complicating Pregnancy"
By: W. P. Hutcherson, M.D., Chattanooga, and Gerald I. Jones, M.D., Chief Resident, Department of Ob. & Gyn, Erlanger Hospital, Chattanooga

10:30 A.M.
Intermission (Visit Exhibitors)

11:00 A.M.
"Intravenous Treatment of Respiratory Distress Syndrome"
By: Lee Austin, M.D., Memphis

11:30 A.M.
"Relationships Between Vaginal Cytology and Genital Tract Bacteria"
By: James R. Reinberger, M.D., Professor of Ob-Gyn, University of Tennessee Medical School
Irving Slotnick, M.D., Microbiologist, St. Jude Hospital, Memphis
W. F. Mackey, M.D., Chief Ob-Gyn, St. Joseph Hospital, Memphis

WOMAN'S AUXILIARY TO THE TENNESSEE MEDICAL ASSOCIATION

MONDAY, APRIL 13, 1964
Claridge Hotel

PROGRAM

8:00 A.M.-12:30 P.M.
Registration—Claridge Hotel

8:00 A.M.-9:45 A.M.
Pre-Convention Board Breakfast—Adams Room, Claridge Hotel

9:00 A.M.-4:30 P.M.
Arts and Crafts Show—Aztek Room

9:00 A.M.-4:30 P.M.
Hospitality—Aztek Room

10:00 A.M.-12:00 Noon
General Convention Session—Empire Room, Claridge Hotel

12:15 P.M.—SNACKS—Aztek Room

1:00 P.M.
Choice of tours by private cars to Gardens, Residential Section, Antique Shops and Historical Homes."

6:00 P.M.
Social Hour and President's Banquet—Tennessee Medical Association—Peabody Hotel (Wives invited. Auxiliary Members with or without husbands present, are urged to attend.)

AFTERNOON



TENNESSEE PEDIATRIC SOCIETY

MONDAY, APRIL 13, 1964
Peabody Hotel **Room 214**

12:00 Noon
Luncheon—Room 214

1:00 P.M.
Business Meeting

SCIENTIFIC PROGRAM

Pope Holliday, M.D., Chattanooga
President, Tennessee Pediatric Society, Moderator

2:00 P.M.
"The Treatment of Diarrhea in Infancy"
By: Stanley E. Crawford, M.D., Memphis, Department of Pediatrics, University of Tennessee College of Medicine

2:30 P.M.
"Genital Abnormalities in Infancy and Childhood"
By: Robert Franks, M.D., Nashville, Department of Pediatrics, Vanderbilt University School of Medicine

3:00 P.M.
(Intermission)
(Please Visit Exhibits)

3:15 P.M.

"Diagnostic Tips in the Peripheral Blood"
By: A. H. Tuttle, M.D., Memphis, Department of Pediatrics, University of Tennessee College of Medicine

3:45 P.M.

"Recent Advances in Immunization of Children"
By: Sarah H. W. Sell, M.D., Nashville, Department of Pediatrics, Vanderbilt University School of Medicine

4:15 P.M.

(Intermission)

(Please Visit Exhibitors)

4:30 P.M.

"The Practical Application of Chromosomal Studies in Mongolism"
By: Robert L. Summitt, M.D., Memphis, Department of Pediatrics, University of Tennessee College of Medicine

☆

TENNESSEE SOCIETY OF PATHOLOGISTS

MONDAY, APRIL 13, 1964

12:00 Noon

Luncheon **Pompeian Room**
Peabody Hotel

SCIENTIFIC PROGRAM

1:00 P.M.

"Gas Chromatography — Its Clinical Laboratory Applications"
By: Harold Lyons, Ph.D. (Guest Speaker)

2:00 P.M.

"The Disposition of S.T.S. Positive Blood in a Transfusion Service"
By: R. H. Walker, M.D., Memphis

2:25 P.M.

"Intraoral Leucoplakia"
By: O. H. King, D.D.S., Memphis

2:50 P.M.

"Familial Degeneration of the Globus Pallidus A New Disease
By: W. F. McCormick, M.D., Memphis

3:15 P.M.

"The Pathology of Shigellosis"
By: J. T. Francisco, M.D., Memphis

3:50 P.M.

Business Meeting

☆

TENNESSEE RADIOLOGICAL SOCIETY

MONDAY, APRIL 13, 1964

Peabody Hotel **Room 215**

12:00 Noon

LUNCHEON

1:30 P.M.

SCIENTIFIC PROGRAM

"Lymphangiography"
By: John M. Dennis, M.D., Professor of Radiology, University of Maryland College of Medicine, Baltimore

2:30 P.M.

Film Reading Session—Interesting films shown by Radiologists of Tennessee

* * * * * *

Please Visit Exhibitors

☆

TENNESSEE DIABETES ASSOCIATION

MONDAY, APRIL 13, 1964

Room 216 **Peabody Hotel**

12:15 P.M.

Luncheon—Room 216

Guest Speaker:

"Newer Concepts in the Development of Diabetes"
By: Henry Oppenheimer, M.D., Associate Professor of Clinical Medicine, St. Louis, Missouri

SCIENTIFIC PROGRAM

1:30 P.M.

"The Many Faces of Diabetic Keto-Acidosis"
By: Richard C. Sexton, Jr., M.D., Knoxville

2:00 P.M.

"Considerations in the Diagnosis of Hypoglycemia"
By: John W. Runyan, M.D., Memphis

2:30 P.M.

Intermission—Visit Exhibitors

3:00 P.M.

"Diabetic Nephropathy"
By: Fred E. Hatch, Jr., M.D., Memphis

3:30 P.M.

Clinicopathological Conference—Nashville

4:00 P.M.

Business Meeting (Members Only)

NOTICE

All members of the Tennessee Medical Association attending the Annual Meeting are invited to attend the luncheon and meeting of the Tennessee Diabetes Association.

Please Make Your Luncheon Reservations Early

☆

TENNESSEE INDUSTRIAL MEDICAL ASSOCIATION

MONDAY, APRIL 13, 1964

1:30 P.M.

PROGRAM

Address by the President of the Tennessee Industrial Medical Association—E. C. Segerson, M.D., Memphis

SCIENTIFIC PROGRAM

"Diagnostic Problems in Industrial Orthopedics"
By: Paul H. Williams, M.D., Memphis, Orthopedic Surgeon

Panel Discussion:

"Compensation—Employee's Ability to Work Following Injuries and Illnesses"
Moderator: George E. Paullus, M.D.

Members: Mr. Fred Ivy, Jr., Attorney
Mr. Walter L. Koch, Director of Personnel Safety, Humko Products, Division of National Dairy
J. J. Weems, M.D.
Dudley G. Lockwood, M.D.
E. C. Segerson, M.D.

(General Questions and Answers)

Visit Exhibitors

☆

TENNESSEE THORACIC SOCIETY

MONDAY, APRIL 13, 1964

Louis XVI Room **Peabody Hotel**

Joint Annual Meeting with the TENNESSEE CHAPTER—AMERICAN COLLEGE OF CHEST PHYSICIANS

SCIENTIFIC PROGRAM

1:30 P.M.

"Clinical Evaluation of Dyspnea"
By: Richard Obenour, M.D., Knoxville

(Discussion)

2:00 P.M.

"Pulmonary Alveolar Proteinosis. A Clinical and Pathological Study"
By: W. J. Acuff, M.D.
F. S. Jones, M.D., Knoxville
B. M. Nelson, M.D., Oak Ridge
R. W. Newman, M.D., Knoxville

(Discussion)

2:30 P.M.

Panel Discussion

"Present Day Treatment of Pulmonary Tuberculosis"
Moderator: Carl Muschenheim, M.D., Professor, Clinical Medicine, Cornell University, New York, New York

Panel
Members: F. H. Alley, M.D., Memphis
E. F. Harrison, M.D., Nashville
P. M. Huggin, M.D., Knoxville

3:30 P.M.

Intermission—Visit Exhibitors

4:00 P.M.

Business Meeting

☆

PRESIDENT'S BANQUET

Peabody Hotel—Memphis
Social Hour—6:00 P.M.—Banquet 7:00 P.M.
(Accommodations limited. Get your ticket early before 2:00 P.M. Monday, April 13.)

☆

Tuesday, April 14, 1964

9:00 A.M.

House of Delegates, Georgian Room Peabody Hotel—Memphis

SPECIALTY SOCIETIES

MORNING

TENNESSEE ACADEMY OF OPHTHALMOLOGY AND OTOLARYNGOLOGY

TUESDAY, APRIL 14, 1964
Downtowner Motor Inn—162 Union Ave. (Terrace 60) Memphis

SCIENTIFIC PROGRAM

8:50 A.M.

Meeting called to order—
William Murrah, M.D., President

9:00 A.M.

"Topical Thio-Tepa As An Inhibitor of Corneal Vascularization"
By: Joseph S. Talley, M.D., Memphis

9:20 A.M.

"Radiological Features Associated with Unilateral Exophthalmos in the Pediatrics Age Group"
By: H. Y. Yune, M.D., Nashville

9:40 A.M.

"Unilateral Proptosis in Children"
By: Lee R. Minton, M.D., Nashville

10:00 A.M.

"Surgical Anatomy of the Orbital Floor"
By: Dale A. Teague, M.D., and Reese W. Patterson, M.D., Knoxville

10:20 A.M.

(Intermission)

10:29 A.M.

"One Stage Excision and Plastic Closure of Lower Lip Lesions"
By: Richard W. Binger, M.D., Memphis

10:50 A.M.

"Wire-Loop Gelfoam Stapedectomy"
By: W. G. Kennon, M.D., Nashville

11:10 A.M.

"Teflon Piston Operation for Severe Otosclerosis"
By: John J. Shea, M.D., Memphis

11:30 A.M.

"The Management of Nasal Polyps"
By: Sam H. Sanders, M.D., Memphis

12:15 P.M.

LUNCHEON

1:00 P.M.

Round Table Discussion

* * * * * *

Visit Exhibitors

☆

WOMAN'S AUXILIARY TO THE TENNESSEE MEDICAL ASSOCIATION

TUESDAY, APRIL 14, 1964
Claridge Hotel

PROGRAM

8:00 A.M.-11:00 A.M.

Registration—Claridge Hotel Lobby

9:00 A.M.-12:00 Noon
General Convention Session—Empire Room
9:00 A.M.-4:30 P.M.
Hospitality—Arts & Crafts Exhibit—Aztek Room
12:30 P.M.
Honors, Awards and Installation Luncheon—
3:30 P.M.
Post Convention Board Meeting—Adams Room
4:00 P.M.-5:00 P.M.
Pick up Arts and Crafts entries—Aztek Room

AFTERNOON

TENNESSEE CHAPTER AMERICAN COLLEGE OF SURGEONS

TUESDAY, APRIL 14, 1964
Continental Ballroom **Peabody Hotel**

WELCOME

The Tennessee Chapter, A.C.S. extends a cordial invitation to all physicians attending the TMA meeting, to be the guests at the scientific sessions of the A.C.S. on Tuesday, April 14. Residents, interns and students are especially welcome.

PROGRAM

All Papers Except That Of Guest Essayist To Be Twelve Minutes In Length In Order To Allow For Discussion.

1:00 P.M.-1:30 P.M.
Visit Exhibitors

SCIENTIFIC PROGRAM

1:30 P.M.
"Those Who Serve"—Motion Picture
Past Presidents Honorary Golden Anniversary A.C.S.

2:00 P.M.
"The Significance of Steroid Therapy in Patients with Ulcer"
By: J. D. Martin, M.D., Professor and Chairman, Department of Surgery, Emory University, Atlanta

2:30 P.M.
"Differential Diagnosis of Jaundice"
By: E. H. Storer, M.D., Memphis

2:45 P.M.
"Volvulus of the Sigmoid Colon"
By: W. D. Dunavant, M.D., Memphis

3:00 P.M.
"Studies of Abdominal Wound Separation"
By: Robert M. Miles, M.D., Memphis

3:15 P.M.
"The Role of Blood in Fibrothorax"
By: Roger T. Sherman, M.D., Memphis

3:30 P.M.
"Technical Procedures in Surgery of Occlusive Disease of the Leg"
By: J. D. McCaughan, M.D., Memphis

3:45 P.M.
"Management of Vascular Injuries—Base of Neck"
By: J. W. Pate, M.D., Memphis

4:00 P.M.
"Hand Injuries"
By: Lee Milford, M.D., Memphis

4:15 P.M.
Business Meeting
Tennessee Chapter, American College of Surgeons

EVENING PROGRAM

SOCIAL HOUR and BANQUET

Guest Speaker: Dr. Kenneth McFarland Guest Lecturer of General Motors Corporation. Dr. McFarland is one of America's foremost public speakers.

Members of the Tennessee Medical Association and Guests are invited to the Social Hour and Banquet. PURCHASE YOUR TICKETS EARLY TO SECURE RESERVATIONS.

Social Hour and Banquet—
Colonial Ballroom, Peabody Hotel

TENNESSEE ACADEMY OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

Room 216 **Peabody Hotel**
TUESDAY, APRIL 14, 1964
12:00 Noon
Luncheon—Room 216

SCIENTIFIC PROGRAM

Frank A. Moore, M.D., President, Presiding

2:00 P.M.
"The Nature and Extent of Alcoholism"
By: Marvin A. Block, M.D., Chairman of Committee on Alcoholism of the Council on Mental Health, American Medical Association

3:00 P.M.
Visit Exhibitors

3:30 P.M.
"Psychiatric Aspects of Alcoholism"
By: T. S. Hill, M.D., Chairman Emeritus and Professor of Department of Psychiatry, University of Tennessee College of Medicine and Director of Brain Research Laboratory

3:45 P.M.
"The Physician and His Relationship to Alcoholics Anonymous"
By: Jack Adams, M.D., Chattanooga, Member of Tennessee Alcoholism Commission

4:00 P.M.
Panel Discussion

Mr. Ben C. Liebermann, ACSW, Director of Division of Alcoholism, Tennessee Department of Mental Health

T. S. Hill, M.D.; Jack Adams, M.D.; Marvin A. Block, M.D.; and

John M. Barron, M.D., Medical Director, Alcoholic Rehabilitation Unit at Tennessee Psychiatric Hospital and Institute.

TENNESSEE NEUROSURGICAL SOCIETY

TUESDAY, APRIL 14, 1964
Room 213 **Peabody Hotel**

SCIENTIFIC PROGRAM

2:00 P.M.

ROUNDTABLE DISCUSSION

Disability Determination in Neurosurgical Patients With Special Reference to Workmen's Compensation Cases.

"Discussion of Requirements of the Law and What the Judge Needs to Know"—

Honorable GREENFIELD Q. POLK
Judge, Circuit Court, Shelby County

"The Problem From the Attorney's Point of View"—

Honorable THOMAS R. PREWITT
Attorney-at-Law

General Discussion Opened by:

WILLIAM F. MEACHAM, M.D., Nashville
AUGUSTUS MCCRAVEY, M.D., Chattanooga

Any physician attending the TMA Annual Meeting is Welcome at this Roundtable Discussion, which will last approximately one and one-half hours.

3:45 P.M.—Visit Exhibitors



TENNESSEE DISTRICT BRANCH—AMERICAN PSYCHIATRIC ASSOCIATION

TUESDAY, APRIL 14, 1964

Tennessee Psychiatric Hospital and Institute

865 Poplar Ave., Memphis

12:00 Noon

Luncheon—(Members Only)

Tennessee Psychiatric Institute

2:00 P.M.

SCIENTIFIC PROGRAM

Tennessee Psychiatric Hospital and Institute

"Biochemistry of Schizophrenia"

By: GARABED H. AIVAZIAN, M.D., Chairman, Department of Psychiatry, University of Tennessee College of Medicine

"Cowboy and Suburbia"
"Changing Profile of Piety in America"

By: The Reverend ROBERT M. WATSON, Chaplain of Quintard House

Business Meeting

(Members Only)

Wednesday, April 15, 1964

Scientific

MORNING

Continental Ballroom **Peabody Hotel**

9:00 A.M.

"SYMPOSIUM ON TRAUMA"

ANTHONY P. JEROME, M.D., Memphis—Moderator

"General Treatment of the Multiple Injury Patient"

By: BYRON O. GARNER, M.D., Union City

"Diagnosis and Treatment of Major Injuries of the Face"

By: MCCARTHY DEMERE, M.D., Memphis

"Emergency Care of Fractures"

By: ROBERT J. SMITH, M.D., Jackson

"Emergency Care of Acute Head Injuries"

By: WARREN H. KIMSEY, M.D., Chattanooga

"Treatment of Hand Injuries"

By: ANTHONY P. JEROME, M.D., Memphis

The Symposium on **Trauma** is sponsored and presented by the Tennessee Society of Plastic Surgeons. The Society is also sponsoring a scientific exhibit during this meeting on the subject of "Trauma."

10:30 A.M.

Intermission—Visit Exhibitors

10:45 A.M.

"SYMPOSIUM ON RESPIRATORY PHYSIOLOGY AS RELATED TO CLINICAL PRACTICE"

Participants:

BOB GINN, M.D., Surgeon, Memphis

CHARLES V. DOWLING, M.D., Internal Medicine, Memphis

WM. H. L. DORNETTE, M.D., Anesthesiology, Memphis

HARRY L. DAVIS, M.D., Internal Medicine, Memphis

The Symposium on **"Respiratory Physiology As Related to Clinical Practice,"** is jointly sponsored by the Tennessee State Society of Anesthesiologists and the Tennessee Thoracic Society.



Memphis' Best Address

Welcomes

THE WOMEN'S AUXILIARY

TO THE

Tennessee Medical Association

OFFICIAL HEADQUARTERS

HOTEL CLARIDGE

APRIL 12-13-14-15, 1964

Scott J. Stewart, Managing Director

The advances in vascular surgery and their application have extended life for many persons, especially in the elderly. The control of renal hypertension due to abnormalities of the renal arteries continues to be an ever expanding field in surgical endeavor.

Evaluation And Surgical Management Of Atherosclerotic Vascular Lesions*

WILLIAM H. EDWARDS, M.D.*

Increased longevity of an aging population presents the medical profession with new problems in the diagnosis and management of disease. Atherosclerosis is recognized as a leading cause of death and disability in people 50 years of age and older. Advances in diagnosis during the past decade have led to the realization that vascular disease can be treated with a high degree of success and, although the basic cause for the deposition of lipid and cholesterol is not solved, disabling and crippling conditions can be corrected or improved.

The application of well planned surgical procedures, based on sound principles established during the past several years, has opened a new horizon to patients with benign but disabling conditions, allowing them to return to gainful occupation. Although a disease of the older age groups, disabling arteriosclerotic lesions may strike during the prime productive years of life. The vascular surgeon now finds himself in a position to offer relief from the symptoms produced by arteriosclerotic occlusive disease, and in many instances retard further advances of the disease or prevent crippling strokes.

The recognition of the segmental nature of atherosclerotic lesions affecting major arteries, development of technics for arterial suture, and methods for removing or replacing diseased arteries have made possible the advances in treatment of vascular disease. Three basic surgical approaches have evolved: excision with replacement by graft, endarterectomy, and graft bypass. The correct selection of patients for operation and the application of the proper surgical procedures leads to gratifying results in a high percentage of patients.

The first successful form of replacement by arterial graft was the arterial homograft, which had certain disadvantages. Procurement and preparation were inconveniences, and with use it was found that undesirable degenerative changes took place in about 10% of patients. Development of a satisfactory substitute for homografts led to the use of Ivalon, Nylon, Orlon, Teflon, and Dacron. Teflon and Dacron are widely accepted and have been used for several years. Both woven and knitted tubes are utilized, but because of the high incidence of thrombosis, Teflon has been abandoned for the most part. The early failure of many synthetic tubes of smaller diameter led to the development of technics for procurement of autogenous veins, primarily the saphenous, and its use for arterial replacement. Limitation of the size of vein available is an inherent disadvantage with vein grafting and so knitted, seamless Dacron is at present the best available synthetic for replacement of a large artery. Experimental work is underway in an attempt to develop a more suitable synthetic product.

An analysis has been undertaken to assess the results of surgical management in 129 patients evaluated for vascular lesions. The patients have been grouped according to anatomic location of disease.

Cerebral Ischemia

The recognition that extracranial arterial occlusion produces cerebral vascular insufficiency, in conjunction with technics of angiographic demonstration of these lesions, has led to the prevention of impending strokes and amelioration of symptoms due to cerebral ischemia. The most com-

*From the Department of Surgery, Vanderbilt University School of Medicine, and the Surgical Service, St. Thomas Hospital, Nashville, Tenn.

mon cause of obstruction of the carotid or vertebral-basilar system is arteriosclerosis, occurring at the bifurcation of the external and internal carotid or origin of the vertebral from the subclavian artery. Occasionally, involvement of the arch of the aorta or proximal portion of the subclavian will produce symptoms related to the upper extremities as well as cerebral or cerebellar systems.

Evaluation of 51 patients with signs and symptoms of cerebral insufficiency revealed an extracranial cause in 30 patients (60%). In addition, 4 patients were found to have occlusion of an intracerebral branch of the internal carotid artery, while an unsuspected subdural hematoma was found in 2 instances. Lesions at a level in the internal carotid beyond the limits of safe surgical approach were the cause in several, while concomitant disease was felt to preclude surgical intervention in several others. (Fig. 1.)

Twenty-three surgical procedures were carried out in the 20 patients suitable for restoration of arterial circulation. Sixteen patients were thought to have cerebral ischemia due to diminished circulation via the internal carotid system. Four patients were found to have vertebral-basilar insufficiency related to lesions of the origin of the vertebral or of the proximal subclavian artery.

The patient who presents with a history of weakness of an extremity, visual disturbances, or speech impairment should be investigated for the possibility of extracranial arterial disease. The presence of a murmur beneath the angle of the mandible or in the supraclavicular area is suggestive of partial arterial obstruction, but its absence does not rule out such a lesion. (Fig. 2.) It is generally agreed that arterio-



Fig. 2.

graphic demonstration of the presence of an obstructing lesion is helpful before operation is undertaken. Not only is one able to determine the extent of the disease process, but the status of the intracerebral circulation is assessed with accuracy. Mortality and morbidity are both extremely low with arteriography, and the information gained from a diagnostic arteriogram is invaluable. Inadequate or improper technic is the major cause of complications in cerebral angiography. Sensitivity to dye

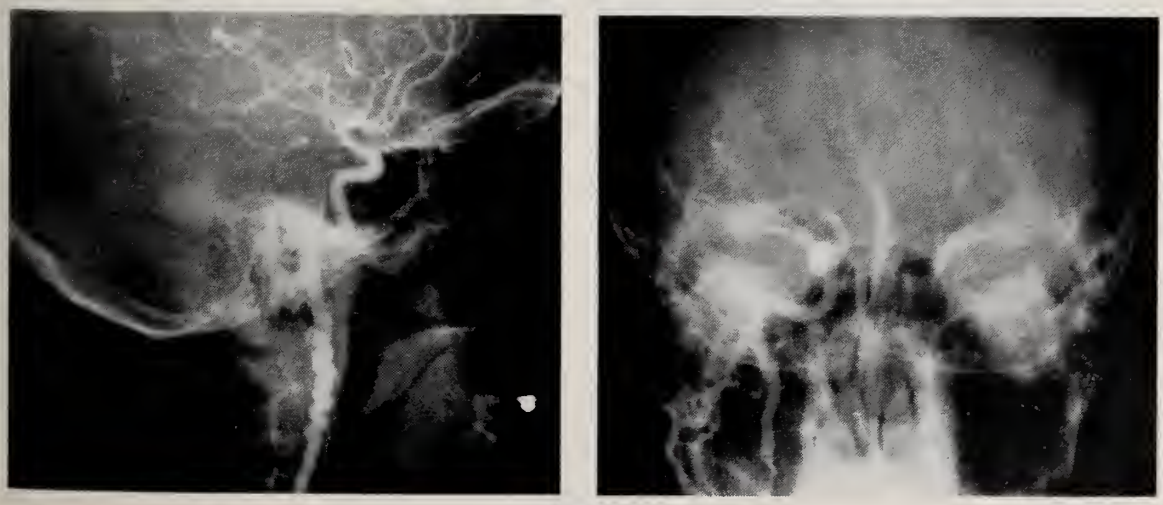


Fig. 1.

and strange, unknown causes probably account for only a small percentage of complications.

Strokes, as a result of cerebral ischemia, may be classified as acute, transient, progressive and completed. The completed stroke, due to the brain cell damage which occurs, does not lend itself to good surgical results. The patient who has had an acute hemiparesis requires investigation rather promptly to ascertain its cause. The time interval between occlusion of circulation and death of brain cells is quite critical. If the only collateral branch supplying the internal carotid system remains patent, restoration of circulation can be expected to relieve the symptoms. One patient in this group was classified as having an acute stroke since he developed aphasia and right hemiparesis while being investigated for a transient episode of weakness of the right hand, with an associated bruit of the left internal carotid artery. Arteriogram confirmed complete occlusion of the internal carotid with filling of the carotid siphon via the ophthalmic. (Fig. 3.) Endarterectomy was performed within the hour and the patient recovered completely. In the progressive stroke, or the patient with recurring transient episodes, excellent results can be expected with restoration of normal arterial flow. One patient in this series was classified as a progressive stroke and following operation continued improvement in the weakened left arm and leg was noted. (Fig. 2.)



FIG. 3.

Transient bouts of cerebral ischemia, thought to be related to extracranial obstructing lesions, was the basis for surgical intervention in 14 patients. Buckling of the internal carotid artery (Fig. 4a) accounted for the lesion in 3 patients, while the remaining 11 patients had arteriosclerotic lesions. Resection and end-to-end anastomosis was the procedure utilized in the 3 patients who demonstrated buckling of the internal carotid, bilateral resection being necessary in one of these patients. (Fig. 4b.) The predilection of atherosclerotic lesions for the origin of major vessels or bifurcation of major vessels accounts for the relative ease of surgical correction of these lesions. Endarterectomy, with application of a patch graft was used in the

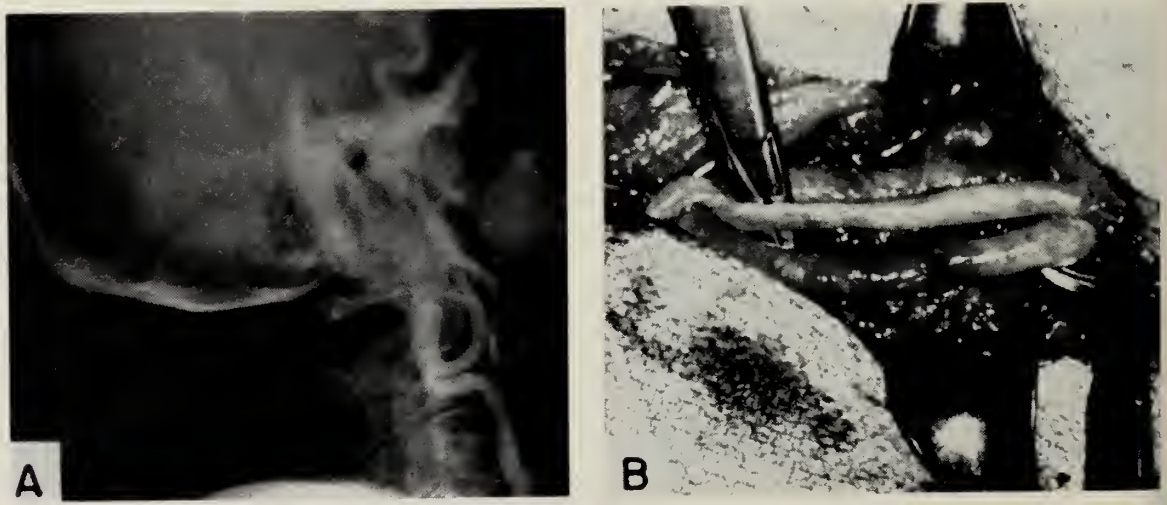


FIG. 4.

om the
xecutive
irector

MEDICAL DIGEST

News of Interest to Doctors in Tennessee

129th Annual Meeting Program in this Issue

● This issue of the Journal contains the complete program for the 129th Annual Meeting to be conducted in Memphis. The scientific presentations this year will have a different format. Any member attending the annual meeting will have a choice of scientific presentations. The seventeen specialty societies meeting concurrently with the Tennessee Medical Association have opened their scientific meetings to any member of TMA. These sessions can be attended on Sunday, Monday, and Tuesday, April 12, 13 and 14. On Wednesday morning, April 15, two interesting symposia will be presented. (See Program.)

1964 Nominating Committee Appointed

● In keeping with Chapter V, Section 2, of the By-Laws, the Board of Trustees appointed a Nominating Committee for 1964 from a list of certified delegates furnished by the county medical societies. Three members of the Nominating Committee from each grand division of the State were named. They are:

Dr. Harmon L. Monroe, Erwin
Dr. Richard C. Sexton, Knoxville
Dr. Wm. J. Sheridan, Chattanooga
Dr. James C. Gardner, Nashville
Dr. Charles A. Trahern, Clarksville
Dr. James W. Wilkes, Jr., Columbia
Dr. Charles N. Hickman, Bells
Dr. Harold B. Boyd, Memphis
Dr. Laurence W. Jones, Union City

President's Banquet

● The President's Banquet and Social Hour will be conducted in the Peabody Hotel in Memphis. The Social Hour will precede the Banquet on Monday evening, April 13.

Following the Banquet, Berl Olswanger and his orchestra will play for dancing. Reservations are limited. Get your tickets in advance.

House of Delegates April 12-14

● Sessions of the House of Delegates where a full agenda will be presented, are scheduled for Sunday, April 12 and Tuesday, April 14, in the Peabody Hotel.

Resolutions for the House of Delegates

● It should be kept in mind that resolutions emanating to the House of Delegates for consideration from county medical societies should be submitted to the headquarters office not later than March 25th, in order to be reproduced and included in the compilation of resolutions and reports distributed to the delegates at the opening session of the House.

Physicians on Increase In Tennessee

● The number of licensed physicians in Tennessee increased 30% from 1950 to 1963, far ahead of the population gain which was only 11%. A report from the University of Tennessee College of Medicine reveals that the state now has 3,636 licensed physicians, a gain of 854 over the 1950 total.

In 1950 there was one physician for every 1,183 persons in the state, compared with one for every 1,005 persons in 1963.

Health Message To Congress

● On February 10, President Johnson sent to the Congress his personal message on health which ranged from medical care for the aged under Social Security to increased research in heart disease, cancer, and strokes. Relating many administration proposals already pending in Congress, the President's message appeared to be an effort to please everyone. The President emphasized the need for passage of a Social Security financed medical care for the aged bill which would provide coverage to everyone over 65 years of age regardless of need or of previous contributions to Social Security.

IRS Bars "Kintner Group"

● The Internal Revenue Service dealt a blow to physicians and other professional men planning to band together into professional associations for tax purposes. The proposed regulation states that such professional associations must have the characteristics of a business corporation in order to qualify for corporate tax treatment, which, authorities say, would be virtually impossible for a group of professional men.

The new rules as adopted by IRS, according to an American Medical Association attorney, neutralize the professional corporation and association laws enacted by many states. (This includes Tennessee, since the partnership act was amended to include professional associations.)

King-Anderson Action To Come Early

● A showdown on the issue of compulsory government medical care through social security may come any day. How much push that President Johnson will give to Medicare has been pretty well spelled out in his message to the new Congress. You can be sure that proponents will make the big fight thi year. The best available information is that the vote from the House Ways and Means Committee will be soon. Now is th time for physicians, their wives, and others to let their views be known to their representatives in Congress, in the House and Senate. NOW IS THE TIME!

Dependents' Medical Care Cases Handled In Tennessee

● During the year 1963, the Tennessee Hospital Service Association, fiscal agent for the Dependents' Medical Care Program paid 7,334 cases for the Dependents' Medical Care Program in the State. The total payment of these cases amounted to $574,148.00, paid to Tennessee doctors.

Have You Heard ? ? ?

● Tennessee now stands second in the nation in number of students graduating from medical self-help courses. 15,752 students have been trained for an average of 34.6 students per class . . . That between 10 and 15 thousand letters a day are handled by the American Medical Association.

AMA Announces Highlights of the Annual Convention In June

● The AMA has announced that the 113th Annual Convention i San Francisco, June 21-25 is virtually complete, and that a attendance of between 15,000 and 16,000 physicians is anticipated. If you plan to attend, get your reservations early. The San Francisco program will be most comprehensive, including lectures, scientific exhibits, preview shov ings of medical films, and color television.

Committee on Medicine And Religion

● TMA's Committee on Medicine and Religion met on January 26 in Nashville where a program for county medical societi was developed. It was recommended that heads of religious denominations in the State be contacted to seek endorsemen of the program. A meeting is planned with the leaders of the various State religious denominations.

Public Service

THE TENNESSEE TEN

Hadley Williams, Public Service Director

Kerr-Mills Benefits Exceed $1¼ Million

● The following news story was released by the TMA Public Service Office to every Tennessee daily and weekly newspaper recently and received considerable space in many of the papers:

Tennesseans age 65 and over received more than one and one-quarter million dollars in hospital, nursing home and drug benefits under Kerr-Mills during 1963. An average of $105,788 per month was paid for medical services to beneficiaries of the Medical Assistance to the Aged program (Kerr-Mills), according to State Welfare Department figures.

The program, during its second full year of operation, showed tremendous increases in number of applications filed, individuals certified, number of hospital admissions, total days of hospitalization, individuals receiving drugs, total prescriptions filled, as well as money spent for these services. Figures for nursing home care also jumped but do not offer a true picture since this benefit was added in mid-1962.

The number of individual applications approved for benefits by the end of December numbered 22,686, an increase of 99½% over the previous year. Hospital admissions advanced 114%, while days of hospitalization provided increased an amazing 390% over 1962. The number of individuals who received drugs increased 161%, while the number of prescriptions filled rose 193%.

Recipients of Old Age Assistance received, in addition to the above, more than $2½ million in payments for medical care under the second part of the Kerr-Mills law.

Dr. Bland W. Cannon, President of the Tennessee Medical Association, in noting the figures just released said, "This unquestionably shows the progress Kerr-Mills has made in the 30 months of its existance, despite efforts on the part of some who would prefer to scuttle a program of helping those who need help for a federally controlled program of benefits to all regardless of their need."

"Contrast the total spent last year to the amount the King-Anderson Bill would have compelled Tennessee workers and employers to pay," Dr. Cannon said. "If the limited social security financed medical care scheme had been in effect, more than $21 million would have been drained from Tennesseans in additional taxes," he continued. "There are those who propose a tax cut to stimulate economy on one hand and endorse legislation that would wipe out a good portion of those savings for an un-needed program on the other."

"The past year's accomplishments under Kerr-Mills cannot be denied, and judging from Tennessee's progress in such a short time, arguments proffered by proponents of Fedicare are becoming more and more meaningless as Kerr-Mills continues to be given a fair chance to prove its value," Dr. Cannon concluded.

thletic Team octors

● Tennessee physicians who serve in their communities as "team physician" for athletic events may obtain a set of "rules" drawn up by the AMA legal department to guide them

in carrying out their responsibilities. Copies may be obtained by writing Legal Department, American Medical Association, 535 North Dearborn Street, Chicago, Illinois 60610.

Mental Health Plans For Planning

● The range of surveys and programs designed to help communities secure improved health services has increased in recent years. In the area of mental health alone nearly every state and territory is planning or has begun study activities.

This is indicated in a report issued recently by the Joint Information Service of the American PsychiatricAssociation and the National Association for Mental Health. Titled "Plans for Planning" the report summarizes in 24 pages the pertinent facts in plans for state-wide mental health planning submitted by every U.S. jurisdiction except Guam.

Forty states list about 45 specific mental health problem areas to be studied.

"Plans for Planning" may be obtained from the Joint Information Service, 1700 18th Street, N.W., Washington, D. C. Cost is 35 cents.

Regional Workshop Planned by AMPAC

● The American Medical Political Action Committee will conduct a 1½ day workshop meeting in Atlanta, Georgia on March 21-22 at the Atlanta Biltmore. The purpose of the meeting will be to prepare, individually and organizationally, for the 1964 campaigns.

Topics to be discussed include Membership-Organization and Techniques, Organizing for Political Action, District Organization, Candidate Selection, Working with the Campaign Organization, Financing Educational Programs, Practical Legal Problems and Candidate Committees.

Outstanding speakers scheduled to address the group include Congressmen A. Sydney Herlong of Florida and Thomas Curtis of Missouri.

IMPACT, Independent Medicine's Political Action Committee—Tennessee, is scheduling a breakfast to be given on Tuesday morning, April 14, 1964 in conjunction with the TMA annual meeting in Memphis.

Main speaker for the meeting will be Congressman Joel T. Broyhill of Virginia. Congressman Broyhill is the newest member of the House Ways and Means Committee, replacing the late Howard Baker of Tennessee.

Tickets for the breakfast will be available at the registration desk in the Peabody Hotel.

Tax Bill Contains Medical Expense Revisions

● Significant revisions concerning medical expenses are contained in the tax bill signed by the President, February 26. Persons age 65 or older are now excused from the existing regulation which required that the total paid for drugs and medication must first be reduced by 1% of the taxpayer's gross income in computing his deductible medical expenses. This was recommended by the AMA in testifying on the tax bill before the House Ways and Means Committee.

Another provision of interest to medicine is the change in the "sick pay" regulations. If a worker's sick pay is less than 75% of his weekly salary, he may deduct up to $75 per week immediately if hospitalized, or after seven days if he remains at home. After 30 days, the worker may deduc up to $100 per week as sick pay.

Of possible interest to physicians beginning their practice is the income averaging provisions of the new law whic allows for a five year averaging of income for tax purposes The object of this provision is to soften the tax liability of a sudden and sharp increase in income.

Thought for the Month

● "To sin by silence when they should protest makes coward of men" . . . Abraham Lincoln.

11 patients with localized atherosclerotic plaques. (Fig. 5.) One patient had marked

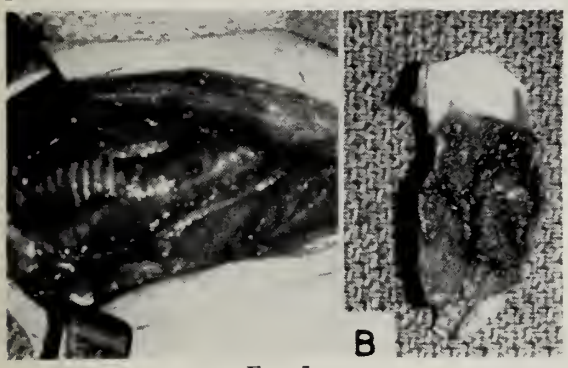


Fig. 5.

narrowing bilaterally and consequently staged bilateral endarterectomies were done with excellent results. Both local and general anesthesia were used for the operations. Tortuous buckled vessels requiring dissection high in the neck are more easily approached under endotracheal anesthesia, while endarterectomies can be readily performed under local infiltration and the patient's cerebral status be assessed at all times. A meticulous endarterectomy, assuring complete removal of the obstructing atheromatous lesion, and the application of a dacron or venous patch graft assures a widely patent vessel. Care is taken to be sure that the distal intima is firmly attached to prevent subintimal dissection.

Vertebral-basilar insufficiency, symptoms of fatigue of the left arm, and diminished to absent left radial pulse indicated partial or complete occlusion of the left subclavian artery in 4 patients. (Fig. 6.) An aorto-to-subclavian bypass graft was the method chosen to relieve the obstruction in one patient, while endarterectomy with application of a patch graft was the procedure in the remaining 3. Bilateral vertebral lesions were corrected in one patient.

The right vertebral artery can easily be approached with a supraclavicular incision, while on the left side access to the subclavian and vertebral arteries requires either a sternal splitting incision or left lateral thoracotomy. Both approaches were used though the thoracotomy is preferred.

The results of the 27 surgical procedures in 20 patients were excellent in 16, all of whom had restoration of normal circulation and relief of symptoms. Three patients were improved following operation but continued to complain of some cerebral symptoms. One patient was made worse by carotid endarterectomy when the distal thrombus could not be removed from the internal carotid, and the patient developed a hemiparesis and aphasia. In 2 instances transient weakness developed following the occlusion of the internal carotid, but in both clearing was complete without residual. Two patients developed transient hoarseness which was thought to be the result of injection and manipulation of the vagus nerve. There were no fatalities associated with operation or arteriography.



Fig. 6.

Aorto-Iliac-Femoral Disease

From large series of cases dealing with aorto-iliac and femoral occlusive disease, certain recognizable patterns in terms of location and extent of disease become evident. The enlarging, occluding atheromatous plaques tend to occur along the posterior wall of the terminal aorta and common iliacs. As flow is decreased secondary thrombosis frequently occurs. Collateral circulation maintains patency of the distal arterial system, and there would frequently seem to be a protective mechanism exerted by the proximal disease process, in that the external iliac arteries and femoral segments may be entirely normal. This would appear to be related to the diminished pressure present distal to the obstructed seg-

ment. The disease may involve the superficial femoral artery for varying lengths, but rarely does it affect the profunda femoris. It is this facet of atherosclerotic occlusive disease that lends itself to increasing the flow into the profunda femoris and thereby increasing the flow through collateral channels in instances of superficial femoral occlusive disease.

Restoration of normal circulation and the relief of symptoms demands a well planned surgical procedure, performed with meticulous care. The type of procedure applied in a given case is, therefore, of great importance. Well localized disease, with normal vessels above and below the occluding lesions, lends itself to thrombendarterectomy and application of a patch graft. Complete aorto-iliac occlusion with or without proximal aneurysmal change is sometimes best handled by excision and graft replacement. The bypass principle of restoration of circulation is best utilized when the disease process is more generalized. Application of the wrong operative procedure can lead to insurmountable technical problems and failure to restore circulation.

One is generally able, from the history and physical examination, to ascertain with a fair degree of accuracy the site of arterial obstruction. Oscillometric readings confirm these physical findings. The patients whose symptoms are localized to the calf, with bounding femoral pulses and minimal ischemic changes of the feet and absent popliteal and pedal pulses, will most likely have superficial femoral artery occlusion with patency of the popliteal artery. Pain at rest in conjunction with ischemic changes of the foot and toes signifies severe distal disease of the leg with poor collateral circulation and minimal chance for arterial reconstruction. Fatigue and claudication of the hips and thighs with diminished to absent femoral pulses signifies proximal obstruction.

Forty-three patients were evaluated for symptoms related to aorto-iliac or superficial femoral occlusive disease. Six patients were seen because of sudden complete arterial occlusion of the common iliac and embolectomy was performed with return of pulses in four. Because of the duration of occlusion of the distal arterial system, amputation was necessary in two. Three elderly men, all over 75 years of age, were treated by lumbar sympathectomy alone with very little benefit, all eventually coming to amputation. Ten of the 43 patients were found by thorough work-up, including aortograms and arteriograms, to have conditions that could not be benefited by operative intervention.

Aortography supplies information which is important in the operative procedure selected. Generally speaking, three methods are available for aortography: translumbar, retrograde femoral and brachial. Intravenous aortography has, for the most part, been abandoned. Brachial aortography has limited value and requires precise timing of films to achieve aortic visualization. Retrograde femoral aortography also has limited use because of the difficulty in inserting a catheter in an artery partially occluded by disease. The translumbar route remains the method applicable to all cases, and with proper technic and knowledge can be safely and successfully utilized to visualize the terminal aorta, renal and femoral vessels.

Thirty-seven operative procedures were performed in 33 patients with aorto-iliac and superficial femoral occlusive disease. A second operation was necessary in 2 patients; the first because of occlusion of the femoropopliteal portion of an aorto-femoral-popliteal graft; the second because of development of a false aneurysm at the site of leakage of an aorto-femoral bypass graft. The remaining two added procedures were staged operations in patients with both aorto-iliac and superficial femoral occlusive disease.

Endarterectomy, resection and replacement by graft, and bypass grafting were all utilized in this series. (Fig. 7.) Endarterectomy alone was the procedure of choice in 12 instances. Pulses were restored to normal in 9 cases, while in 3 patients endarterectomy of the popliteal artery did not successfully remove the obstruction. There was no significant morbidity and no deaths in this group. Two patients with aorto-iliac occlusive disease also had abdominal aneurysms; consequently, resection with graft replacement was used. Bypass grafting was thought to be the pro-



FIG. 7.

cedure of choice in 23 instances. Seventeen operations consisted of aorto-to-femoral bypass, while 6 cases were femoral-to-popliteal bypasses. Teflon was used in 7 cases and knitted DeBakey Dacron in the remaining 16 cases. In addition to the case previously mentioned, in which occlusion of the femoral segment of a graft occurred, there was one additional Teflon femoro-popliteal graft which became occluded during the postoperative period. This particular patient had severe ischemic ulcers of the foot, and rather than attempt further reconstructive surgery, amputation was performed.

Seventeen surviving patients have functioning grafts and have returned to their usual occupations. There are several patients in the series with a combination of aorto-iliac and superficial femoral disease, in whom it was elected to treat the proximal obstruction and not directly approach the femoral portion. Pedal pulses can frequently be restored by this plan of management, and symptoms relieved.

Four patients have died since operation. Myocardial infarction was the cause of death in only one patient, while the remaining 3 died of unrelated causes. The only mortality in the entire series was in a 58 year old cirrhotic, who died of pneumonia following a femoro-popliteal bypass graft.

Renovascular Hypertension

Chou-You-J, a Chinese physician of 200 B.C., wrote, "when the pulse, upon depressing, is very firm, and upon superficial palpation tight, then the disease has its seat in the kidney." In 1898, the enzyme rennin was discovered and in 1934 Goldblatt did his classic work showing the relationship between diminished blood flow to the kidney and hypertension. There is yet no universal agreement as to the exact mechanism whereby decreased blood flow contributes to the production of hypertension, though rapid strides are being made in assembling the puzzle, and from this work certain basic facts become evident.

To screen every hypertensive patient seen for the possibility of a renovascular lesion, is, at the present time, impractical. We must therefore set up certain criteria on which to base our investigation. By this approach the gamut of studies required to adequately ascertain the possible cause of hypertension will not be wasted.

It is generally held that anyone under 30 years of age with elevation of the diastolic blood pressure over 100 mm. Hg. should be investigated. It is likewise believed that very few people over 65 years of age should be subjected to such studies unless the hypertension is uncontrollable. This leaves thousands of patients in the productive years of life in whom a cause for hypertension might be found and a cure effected. It is in this wide age range that criteria must be set up to help determine which patients deserve further study.

At the present time the diagnostic studies employed consist of routine urinary studies,

including catecholamines for a possible adrenal origin of hypertension, intravenous pyelography, radioactive renogram studies, split kidney function tests to determine electrolyte clearance, and finally visualization of the renal arteries by aortography. (Fig. 8.) The intravenous pyelogram is thought by many to be the most important single screening study leading to aortography. The radioactive hippuran renogram is also extremely valuable in localizing unilateral renal disease, but in all cases high quality visualization of the renal arteries is indispensable in planning management.

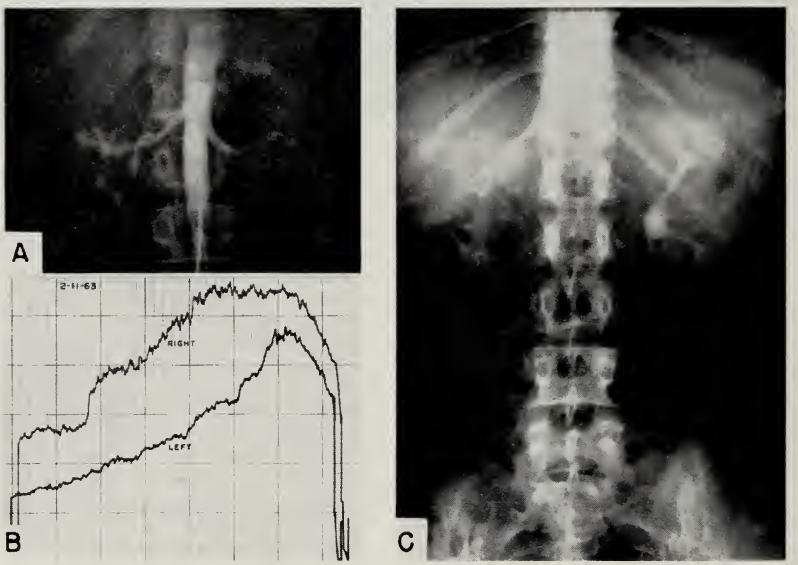


FIG. 8.

Many vexing problems remain to be solved before we will have a concise picture of the cause and effect relationship between stenosis of the renal artery and hypertension. The duration of hypertension surely must be important, and at some point irreversible changes must take place. Experimental work has shown that in the rat, at least, these changes take place fairly rapidly, generally within three months. The evaluation and management of hypertension in the human will be immeasurably easier when we can ascertain the time lapse required for these changes to take place.

Investigation as to the cause of hypertension led to aortography in 35 patients. Translumbar aortography was utilized in 10 patients, several of whom had unsuccessful attempts at retrograde aortography. The remaining 24 had aortic visualization by the retrograde technic. The youngest in the series was 21 years of age, the oldest 73 years. The patient 73 years of age was evaluated in an attempt to halt a rapidly progressing azotemia; the patient did have stenotic vascular lesions but it was thought inadvisable to attempt reconstructive surgery. The 21 year old was a known hypertensive of four years duration but had never been fully evaluated. Aortogram in 17 patients (50%) revealed the presence of a lesion in the renal artery which was believed to be contributing to the patient's hypertension. Three patients elected not to undergo a revascularization procedure; one patient was successfully operated elsewhere, and operation was not advised in 2 patients because of extenuating circumstances. Fourteen operations were performed in 12 patients with hypertension.

Fibromuscular hyperplasia was the path-

ologic process responsible for renal ischemia in 2 young women, 28 and 32 years of age. In both attempts were made to resect the involved portion of renal artery and perform end-to-end anastomosis, but because of technical factors related to the size of the small renal artery nephrectomy was eventually necessary. The response of their blood pressure is graphically demonstrated. (Fig. 9.)

The remaining 10 patients had varying degrees of stenosis secondary to atherosclerotic disease causing obstruction at the lumen of the main renal artery or involving the first several centimeters of the artery. The bypass graft technic was used in 5 patients and endarterectomy with patch graft in 5 patients. The longest follow-up has been three years, with the shortest six months.

The results of surgical therapy have been most encouraging. One patient had very little response in his systolic or diastolic pressure, and the azotemia which was present did not resolve. Two patients were improved and were more easily controlled on medication. The remaining 7 patients have remained normotensive and have required no medication. The first patient in this series was operated upon three years ago, and when last checked his blood pressure was 150/90 mm. Hg. These results have been encouraging enough for us to pursue the relationship of renal artery stenosis and hypertension in an effort to achieve a cure and prevent the changes which take place with prolonged hypertension.

Summary

Diagnosis and treatment of debilitating vascular conditions, which produce strokes and hypertension and cause the loss of limbs and lives, reveals atherosclerosis to be a major cause and, although not curable, can be treated with a high degree of success.

An evaluation has been made of 129 patients thought to be afflicted with atherosclerotic vascular lesions.

Cerebral angiography was successfully and safely performed in 51 patients, 20 of whom were found to have correctable conditions.

Forty-three patients were evaluated for varying degrees of occlusive disease involving the terminal aorta, iliac or superficial femoral arteries. Restoration of circulation was possible in 33 of these patients.

Hypertension, thought possibly to be related to renovascular lesions, led to aortography in 35 patients. Ten patients (30%) were found to have operable lesions in the renal arteries. Excellent results (normotension) have been achieved in 7 patients (70%).

The mortality rate in this series of 130 patients is 0.7%.

The prevention of arteriosclerosis is a goal of medical research, but until this time evaluation and surgical therapy offers excellent relief of symptoms.

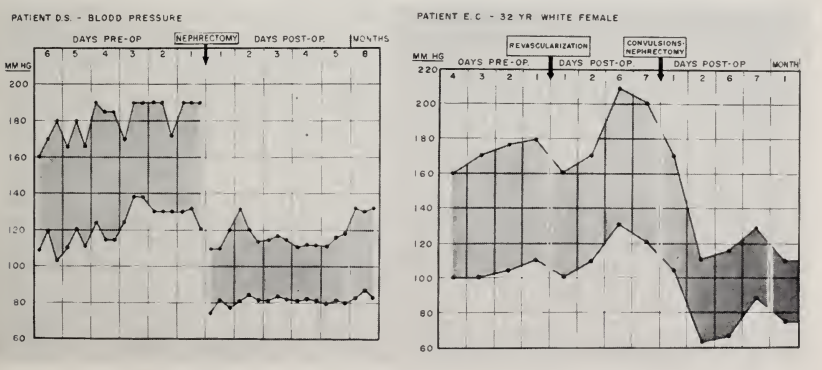


Fig. 9.

CLINICOPATHOLOGIC CONFERENCE

Veterans Administration Teaching Group Hospital

Obstruction of Small Intestine Due to Carcinoid Tumors

Case Presentation

Present Illness. This 41 year old Negro male laborer entered this hospital for the second time because of abdominal pain. His first admission to this hospital, 4 years earlier, was because of cramping and epigastric pain of 20 hours duration. He vomited after a laxative and in about 10 hours had a liquid stool with no blood. A barium enema was normal. Serum amylase was borderline on admission but a second one in 3 days was normal. The patient became asymptomatic and after 12 days of hospital care was discharged.

He continued to have mild attacks of pain relieved by laxatives. Approximately 24 hours prior to his present admission he had severe attacks of cramping abdominal pain each lasting 2 to 3 minutes and doubling him up. There was no radiation of pain, nor nausea, vomiting, diarrhea or constipation. He stated that he was a heavy drinker of alcohol, consuming approximately one pint a day. Greens, milk, ice cream and other foods caused abdominal distress. Greasy foods, however, were tolerated well. He had had no previous operations.

Examination. The patient was a well nourished and developed colored man, lying in bed, complaining of abdominal pain. The B.P. was 150/110, P. 92, T. 99.8°. The skin was moist and warm. The abdomen was slightly distended and tympanitic. No masses or fluid wave were present. Bowel sounds were hyperactive with some tinkling. Abdominal pains coincided with increased peristalses. There was deep tenderness over the tail of the pancreas. Rectal examination was negative.

Laboratory Data. The white counts varied from 6,800 to 9,600 over a period of 2 days. Serum amylase was 63 mg.% on admission and was not repeated. RBC. count was 4.7 million, Hgb. 13 Gm. and PCV. 42 vol.%. Routine urinalysis was essentially normal. Fasting blood sugar was 78 mg.%, and STS were negative. X-ray film of the abdomen on admission showed the colon to contain a moderate amount of gas without distention. In the mid-abdomen just superior to the gas-filled transverse colon were several overlapping areas of gas which in the upright and left lateral decubitus views demonstrated fluid levels. A subsequent abdominal x-ray examination on the 5th day again revealed gaseous distention of the small bowel predominantly in the upper abdomen. Gas was identified in the colon and rectum. Barium enema and chest x-ray film were normal.

Hospital Course. Over a period of 5 days of suction by Levin tube and enemas relieved his symptoms; however, upon removal of the Levin tube abdominal distention and cramping pain recurred. On the 11th hospital day an operation was performed.

From the Medical and Laboratory Services of the Veterans Administration Medical Teaching Group Hospital, Memphis, Tenn.

Discussion

DR. GOMPERTZ: This protocol contains three references which could conceivably suggest pancreatic disease, namely the borderline serum amylase, "tenderness over the tail of the pancreas" and a history of alcoholism. The first has little diagnostic significance in itself since slightly or moderately elevated amylase levels are frequently present in acute abdominal disorders not arising in the pancreas, as well as in pancreatic disease. The second comment is difficult to interpret since the pancreas is a retroperitoneal organ and is not usually palpable even when diseased unless it is the site of a very large cyst or other tumor. I am going to assume that the tenderness noted refers to the general locality such as the left upper quadrant of the abdomen rather than to a specific structure. The third remark is quite vague. Although alcoholism is an important etiologic factor in pancreatitis, it is of such common occurrence without pancreatic disease that one can put little stress on this without other significant associations which are lacking in this case.

The clinical history, physical examination, x-ray studies and hospital course of this patient all add up to a classical description of mechanical obstruction of the small bowel. We are told that this man had intermittent severe abdominal cramps lasting 2 to 3 minutes, subsiding temporarily only to recur periodically and that these cramps were associated with the physical findings of increased peristaltic sounds and distention. This, plus the vomiting noted on the first admission, constitutes the picture of intestinal obstruction. On the second admission, the synchronous occurrence of colic and intestinal noises again suggest mechanical bowel obstruc-

tion, but this time vomiting was absent. This may imply that the block was low in the gut because the retained fluid and intestinal contents proximal to an obstruction must ascend to the stomach before vomiting can occur. In obstructions far down in the ileum there may be considerable distention without emesis, the latter being more frequent and more profuse the higher the block. During the hospital course, there was transient relief following intubation and return of signs and symptoms following removal of the tube, both of which indicate a mechanical impediment to the passage of contents through the small bowel. In addition, the description of the x-ray examinations showing dilated loops of small bowel with air-fluid levels, is also characteristic of small intestinal obstruction.

May I see the films please?

DR. ETTMAN: These films were taken on the previous admission four years before and show numerous loops of dilated small bowel with gas and fluid levels. Next, we have scout films of the abdomen in the prone and erect positions made on the current admission. These x-rays again show marked distention of the small bowel with fluid levels and some air in the colon, which I interpret to indicate that the obstruction was not complete unless the patient had been given an enema prior to the examination. Films taken on the fifth day show essentially the same findings. Lastly, we have a barium enema which appears normal.

DR. GOMPERTZ: Can you tell whether the obstructed loops of bowel are jejunum or ileum?

DR. ETTMAN: There are certain criteria including size, position and pattern of the bowel which, at times, permit reasonably accurate localization, but in this particular instance I cannot be certain as to the exact location of the obstructed loops.

DR. GOMPERTZ: One would like to know whether or not this is complete obstruction. The presence of gas in the colon suggests that it is incomplete unless, as Dr. Ettman said, the patient had been given an enema. Clinically, this man had incomplete obstruction since the signs and symptoms subsided following a period of intubation. A second question which one should attempt to answer with any intestinal obstruction is whether or not strangulation is present. The absence of fever, leukocytosis and signs of peritoneal irritation all indicate that this was simple obstruction without impairment of the viability of the bowel. Apparently the surgeons were reasonably certain of this since they waited eleven days before operating.

Obviously, I cannot say with any degree of certainty what caused this man's obstruction, but can only approach a definite diagnosis by a process of statistical guess work. We know that roughly 50% of all cases of mechanical small bowel obstruction are due to strangulated external hernias and there was no evidence of a hernia on examination of this patient. We also know that about 30% of such obstructions are secondary to postoperative bands, and this man had not had previous abdominal surgery. Thus, failure to find a hernia or an abdominal scar in a patient with small bowel obstruction rules out the two most common etiologies which account for 80% of such obstructions. Hence, I must consider some of the less frequent causes of this condition.

Could this be a volvulus? I doubt it, because this obstruction due to a kinking of the bowel is ordinarily of the strangulating type and usually involves the sigmoid colon or the cecum, and is characterized by the finding of a single, tremendously dilated loop of large bowel on x-ray examinations. However, a volvulus of the small bowel may occur at some lesion such as a tumor, and I will return to this later.

Another cause of small bowel obstruction is intussusception, an invagination of one portion of the gut into another. The vast majority of so called primary intussusceptions occur in childhood and in 60 to 85% of cases, there is a bloody rectal discharge and a palpable abdominal mass is often present. Obviously, this condition is not present here, but a polypoid lesion of the small intestine may invaginate the bowel to cause this type of mechanical hindrance to the normal flow of intestinal contents.

An interesting type of bowel obstruction, which I do not think is involved here is "gall stone ileus." In this condition, most commonly seen in elderly women, the terminal ileum becomes blocked by a large

stone which has entered the intestinal tract by way of a fistula between the gallbladder and duodenum as a result of acute gangrenous cholecystitis. Though there is nothing to suggest this in our patient, I mention it because a similar mechanism for obstruction occurs when a foreign body lodges in the ileum, the narrowest part of the gut, and I suppose this must be considered in view of the fact that the patient was said to be an alcoholic. However, this is a relatively acute condition and the most striking fact in the history is that this man was suffering from recurrent attacks of pain over a period of four years. Judging from the films we have just seen, he was partially obstructed on his first admission, so that we are really dealing with a type of obstruction which is basically recurrent or intermittent, suggesting a chronic condition as the etiologic factor.

I mentioned earlier that the ordinary intussusception and volvulus were not operative in this case, but there is one lesion of the small bowel, a Meckel's diverticulum, which can cause obstruction by both of these mechanisms. In other words, a Meckel's may become inflamed, adhesions may be formed, and as a consequence a kinking or volvulus resulting in obstruction may occur. A Meckel's diverticulum may also invaginate into the bowel and cause intussusception which terminates with obstruction, but this should be accompanied by fever and leukocytosis which did not occur in this patient. Furthermore, if this patient's obstruction were on an inflammatory basis, it would be unlikely for it to recur frequently over a period of years. This leads me to the impression that the most logical cause for this recurrent obstruction should be some lesion which is gradually increasing in size, and therefore causing more and more obstruction culminating finally in the necessity for surgery. Thus, I believe this patient had some type of tumor of the small intestine. Though lymphomas and even sarcomas and carcinomas of the small intestine may occasionally grow slowly, it seems much more reasonable to postulate a benign rather than a malignant neoplasm in view of the four year history. In addition, the absence of vomiting on the second admission implies that the obstruction was low in the ileum and the incidence of benign tumors of the small intestine is higher in the distal portions, whereas malignancies are more frequent proximally. Furthermore, in large, collected series of tumors of small bowel, the benign lesions outnumber the malignant ones. For these reasons I believe this patient had a benign tumor of the ileum.

Clinically, a growth in the small intestine may present in a variety of ways, but the most common features are pain, obstruction, bleeding and perforation. Of these syndromes, obstruction is the most common, and occurs in 67% of cases. It would be presumptious of me to attempt to make a histologic diagnosis. In the literature it is stated that adenomas comprise about 25% of benign tumors of the small bowel and this is apparently the most common type. After this, leiomyomas, neurofibromas, and lipomas are next in frequency with angiomas and carcinoids making up the majority of the remaining tumors plus some which are even more rare.

In conclusion, I will say that this patient had simple, mechanical, small intestinal obstruction in the lower ileum as a result of impaction in the bowel of a benign tumor.

Clinical Diagnosis: Obstruction, lower ileum, due to benign tumor.

DR. YOUNG: This certainly is a picture of an obstruction low in the small intestine. In the literature, some of which you covered, Dr. Gompertz, there is an interesting series of surgical cases.[1] There were 25% which were carcinoma, and these were more common in the duodenum and jejunum. The primary lymphomas which formed 22% of the cases became more common, of course, as you approach the ileum. A third group was made up of the benign tumors of which you were speaking—the adenomas, which are more common in the upper part, usually in the duodenum. This is the only place I know of in the small bowel where they are the most common. The others were leiomyomas, many of which were in the wall or extraluminal and did tend to bleed very often; neurofibromas, and lipomas, which made up 35% of the total. Carcinoids accounted for about 11% of the total, and 7% had sarcoma of nonlymphomatous origin. It was interesting,

though, that the carcinoid cases more frequently entered the hospital with obstruction. The reasons given were the subserosal adhesive reaction as well as shortening and kinking of the mesentery.

At the time of operation, this man did have an intestinal obstruction present in the ileum. Figure 1 is a portion of the ileum



FIG. 1. Ileum showing multiple carcinoids and area of constriction.

showing areas of constriction, representing tumor and surrounding scarring.

The tumor had a somewhat yellowish appearance and produced constricting lesions. At the time of operation, a portion of mesentery was also resected. There was no large mass present, and no mass was ever palpated in this patient.

Figure 2 shows a section through the wall

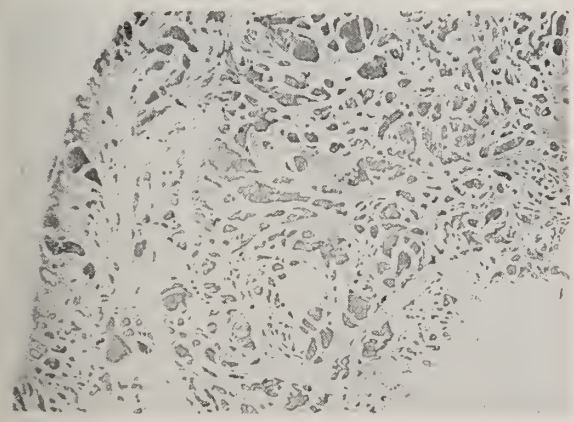


FIG. 2. Carcinoid infiltrating wall of ileum.

showing the microscopic appearance of one of the multiple lesions which were present in this segment of ileum. You can see that this pattern is typical of a carcinoid. The tumor penetrated the muscle layers of the wall, and these cells metastasized to the local lymph nodes. In a series from the Massachusetts General Hospital, 9 of 15 cases had metastasized to the local lymph nodes, 3 had metastasized to the liver, 2 of which presented the carcinoid-cardiovascular syndrome, which apparently was not present in this patient. Most of the cases with a carcinoid-cardiovascular syndrome, as you know, will have hepatic or more distant metastases but this is not always necessary. Unfortunately, before this man's operation, no diagnostic studies were performed. Afterward, they were done but were negative. Two and one-half year follow-up shows that he has remained asymptomatic. These tumors grow slowly, however. In a large series approximately 20% of them did recur later with more distant metastases, but even a 10 year follow-up in a group of cases like this is not always significant as regards the number who will eventually succumb to their disease.[2] In summary then, this represents a case of obstruction of the small bowel due to multiple carcinoids of the terminal ileum with metastases to local lymph nodes.

I think Dr. Gompertz is to be complimented on coming as close to the diagnosis as he did, limiting it to a tumor in this region and placing it more or less a benign type. A lot of people consider carcinoids malignant. Some consider them in a category between a benign tumor and a malignant tumor. Certainly they can be malignant.

About 50% of these cases will show multiple areas of tumor. In this case there was a relatively short segment of ileum with three separate areas of carcinoid tumor. In some cases occurring in the terminal ileum, the cecum also contained carcinoids. There is a fair chance that this man has other carcinoids even though he had a segment of normal bowel on either end.

DR. ETTMAN: A follow-up small bowel series of films revealed one area of possible constriction. This is an unusual picture for a small bowel. I don't think this is the site

of anastomosis. I think he may possibly have another constricting lesion.

DR. YOUNG: He should be called back for more follow-up examinations.

Final Anatomic Diagnoses: Intestinal obstruction caused by carcinoids of ileum with local lymph node metastases.

References

1. Darling, C. R., and Welch, C. E.: Tumors of the Small Intestine, New England J. Med. 260:397, 1959.

2. Pearson, C. M., and Fitzgerald, P. J.: Carcinoid Tumors—a Re-emphasis of Their Malignant Nature, Cancer 2:1005, 1949.

PLACEMENT SERVICE

(Continued from page 94)

OBSTETRICIAN-GYNECOLOGIST, 33 years of age, graduate of the University of Iowa Medical School, would like associate practice in any city in West Tennessee. Now completing third year residency. Married. Hebrew. Junior Fellow, American College of Ob-Gyn. Available immediately. LW-498

◆

INTERNIST, 32 years of age, now in military service, graduate of the University of Louisiana College of Medicine, would like to establish associate, clinical or hospital practice in any large city in Tennessee. Single. Catholic. Available July 1964. LW-499

◆

INTERNIST, Board eligible, 54 years of age, native Tennessean, graduate of the University of Tennessee College of Medicine, would like to relocate in Tennessee. Married. Methodist. Prefers industrial, institutional or public health practice. No preference as to size or location. Available immediately. LW-500

◆

OBSTETRICIAN-GYNECOLOGIST, 38 years of age, graduate of the University of Arkansas School of Medicine, would like assistant, associate, or clinical practice in Middle or West Tennessee city of 50,000 plus. Married. Protestant. Available upon completion of residency, July 1965. LW-501

OBSTETRICIAN-GYNECOLOGIST, 31 years of age, graduate of Duke University School of Medicine, now in residency, would like associate, clinical, or solo practice in East Tennessee city of 20,000 plus. Married. Protestant. Available July 1964. LW-502

◆

INTERNIST, 30 years of age, now in residency, graduate of the Yale School of Medicine, would like associate, or assistant practice in East Tennessee city of 50,000 to 200,000 population. Married. Protestant. Available July, 1964. LW-504

◆

SURGEON, 31 years of age, graduate of the University of Rochester, member of American Board of Surgeons, Candidate American College of Surgeons, would like associate or clinical practice in any city of Tennessee 10,000 to 300,000 population. Married. Protestant. Available July, 1964. LW-505

◆

RETIRED PHYSICIAN, native of northern state, would like to assist in private practice or clinical work in the field of chronic diseases, arthritis, cancer and surgery. Graduate University of Chicago. Prefers small city in Middle Tennessee. Available upon notice. LW-506

◆

RADIOLOGIST, Board certified, 12 years experience, would like to relocate in Tennessee. Graduate University of Virginia School of Medicine. G.P. background. Would like affiliation with small hospital in any area of Tennessee. Age 55. Health excellent. Hebrew. Available immediately. LW-507

(Continued on page XXXIX)

President's Page



Dr. Cannon

External challenges, ever existent, increase progressively to the point of compulsion for one who is conscientious in meeting these challenges. Internal challenges, by contrast, are not always present; and they fade quickly if not nurtured, paling into oblivion if placed in contest with the ever-present external challenges.

An idea is seldom original. It is always in existence; but a receptive, conscious state is necessary to grasp the idea. For many of us such a state is unattainable for more than transient moments. The idea, likewise, if not nurtured, is quickly lost; or if it is brought in to the open without being developed to full maturity, it quickly diffuses, never again to be as effectual. Lacking sufficient fortitude or inner strength to oppose the monopolizing forces in our environment, we are carried along in their current without reaching a consciousness for ideas or an awareness of the true challenges of life.

Environmental trends are so strong a conditioning factor that we accept these trends or forces and become a part of them, just as the dog in Pavlov's original experiments. The common denominator of theories in evolution, Marxism, and even the postulates of Freud, is the characteristic of projecting the human being as the product of these forces outside his control.

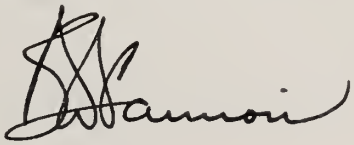
So frequently we hear broadcasts which we interpret—or misinterpret—as delineating protocols of behavior concerning moral codes. Utilizing these protocols, we expect to attain that religious piety which gives us a hope of grasping the eternal. On the contrary, should we not be receiving that stimulus which would redirect our attention and efforts toward inner challenges? For what purpose are we created—as an ant to build a useless mound or to build within ourselves an unlimited understanding so strong that such understanding will give insight not only into our purpose but into that of the universe?

"Life is short, the art is long"—or science is long. Perhaps art or science has its measure, but not so the spirit. This, and this alone, is the probable true value through which we can know infinity. No code of morals, no conformity to environmental forces, can offer as much.

Only when the mind is at rest does the spirit dominate. The mind at rest may be realized when communing with nature, thereby acquiring a state of tranquility without volitional thought direction. Perhaps the mind at rest may be realized in sleep; yes, but not always. For even then the external influences of our thought processes frequently are carried over into troublesome dreams.

There is a way to rescue limited periods of time, therefore, we find our minds undaunted by the agitation of external forces. During these periods of time the stage is set for moments to be recorded from the spirit, and the record approaches a degree of permanency with us, becoming everlasting, but perhaps not fully recognized at the moment of recording. Subsequent analysis permits us always to recall this moment of import.

Greatly to be sought are the attributes of courage, fortitude, and inner strength that can resist the forces of environment to cultivate and prolong the moments during which the internal challenges are met and elusive ideas are grasped.



President

THE JOURNAL
OF THE
TENNESSEE MEDICAL ASSOCIATION
Published Monthly
Devoted to the Interests of the Medical Profession of Tennessee
Office of Publication, 112 Louise Avenue, Nashville 5, Tenn.

Acceptance for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized July 15, 1932.

Copyright for protection against republication. Journals of the American Medical Association and of other state medical associations may feel free to quote from this Journal whenever they desire merely giving credit to this publication.

Address papers, discussions and scientific matter to R. H. Kampmeier, M.D., Editor, B-4211 Vanderbilt University Hospital, Nashville 12, Tennessee
Address organizational matters to Jack E. Ballentine, Executive Director, 112 Louise Avenue, Nashville 5, Tenn.

R. H. KAMPMEIER, M.D., Editor
Vanderbilt University Hospital, Nashville

EDITORIAL BOARD

ADDISON B. SCOVILLE, JR., M.D.
2104 West End Ave.
Nashville 5, Tennessee

ALBERT WEINSTEIN, M.D.
Medical Arts Building
Nashville 12, Tennessee

COMMITTEE ON SCIENTIFIC WORK AND POST GRADUATE EDUCATION
R. H. KAMPMEIER, M.D., Chairman
W. POWELL HUTCHERSON, M.D., Chattanooga
ROBERT P. MCBURNEY, M.D., Memphis
EUGENE J. SPIOTTA, M.D., Memphis
(Specialty Society Representatives to be named)

MARCH, 1964

EDITORIAL

ORAL CONTRACEPTION

During the past decade there has been a change in medical attitudes toward contraceptive techniques, resulting in a transition from concentration on vaginal methods to the development of measures using the constitutional approach which could, theoretically, have widespread effects in various parts of the body.

This new approach reached its first milestone about eight years ago when Pincus and his associates[1] in San Juan, P.R., and Tyler and his group[2] in Los Angeles, California independently reported their clinical trials with this new method.

It is generally agreed that these currently available oral contraceptives are virtually 100% effective if taken daily from the 5th to the 25th day of the menstrual cycle. The high degree of effectiveness is due to inhibition of ovulation as well as two other factors: (1) alteration of the cervical mucus from the normal, thin, glairy, watery type to the thick, viscous mucus usually seen quite late in the cycle and not penetrable by sperm, and (2) use of endocrine substances as described alters the endometrium so it becomes unsuitable for nidation in that the glands become quite atrophic while the stroma is excessively stimulated.

Recently the safety of these substances has been questioned by those interested in their use. These drugs have not been used long enough to evaluate long-term safety. Their short-term safety and the possible relationship to intravascular clotting and embolism has not been clarified despite a recent editorial in the J.A.M.A.

Presently available drug combinations include norethindrone or norethynodrel as the progesterone component and an estrogen. In general, the anovulatory action of these preparations is basically dependent on the estrogen component. It has been shown that very small doses of estrogen given for a few days before ovulation can frequently inhibit ovulation. Progesterone is needed to produce regular withdrawal bleeding. Various dose combinations have been tested in the past and it has been shown that if the dose of progesterone is decreased, the relative amount of estrogen must be increased for effective contraception.

Because of the recognition of the effectiveness of estrogens in preventing pregnancy, a further step has been taken in oral contraception—the so-called "sequential" approach. In sequential oral contraception estrogen alone is given for 15 days of therapy, followed for 5 days by the combination of estrogen and progesterone. The *Wall Street Journal* reports that two of the larger drug manufacturers are preparing to market tablets for "sequential" therapy.

As the dose of oral contraceptives decreases, the effectiveness of therapy does not diminish. The most troublesome side-effects are three. 1) Breakthrough bleeding occurs in 10-20% of patients. 2) Weight gain is very common. 3) Gastrointestinal complaints including nausea and vomiting are occasionally troublesome.

Tyler[3] reports that in about 30,000 cycles of use of one of the oral contraceptives

there was no evidence of pregnancy when he was confident that the medications had been taken according to directions.

Certainly we are on the threshold of exciting discoveries in this field of medicine. A highly effective contraceptive tablet is now available, but the constant reaching and searching for something better motivates man to discover the new, and sail uncharted seas.

A. B. S.

References

1. Pincus, G., et al: Effectiveness of Oral Contraceptive: Effects of Progestin-Estrogen Combination Upon Fertility, Menstrual Phenomena, and Health, Science 130:81, 1959.
2. Tyler, E. T., and Olson, H. J.: Fertility Promoting and Inhibiting Effects of New Steroid Hormonal Substances, JAMA 169:1843, 1959.
3. Tyler, E. T.: Current Status of Oral Contraception, JAMA 187:562, 1964.

★

THE MEDICAL NEEDS OF OUR AGED

There are 309,000 Tennesseans over the age of 65 years. Last month in an editorial comment we tried to evaluate from statistics both national and state, what the state of health may be in oldsters. In 1962, some 4000 were in the State's mental institutions, the majority to remain there to the end of their days. The 338 who were admitted to homes for the aged would stay for an average length of 3 years, many to die there. In that year, 3,849 patients were admitted to nursing homes to stay an average of 308 days. (No doubt the great majority of these were old persons.) Thus, these elderly Tennesseans represented a group of persons supported by State tax funds, fraternal and/or philanthropic (church) money or privately by the patient or his family. No form of federal support directly paid for such hospital or nursing home care. (There is of course federal support of an unknown number of the State's citizens above the age of 65 in V.A. institutions.)

Of the 300,000 Tennesseans outside of institutions and over age 65, 63,000 have no self-proclaimed disability. There is some disability which limits activity to some extent, in their own words, in 69,000 oldsters, and 30,000 need help in getting about while 9,000 are confined to the house. (Some limitation in activity for the 69,000 was the same for the half who were retired and the other half who continued to lead an active life, employed or self employed.) The major causes of limitation of activities were cardiac disease, visual disturbances, paralysis and high blood pressure states.

If hospitalization is imperative, as under the State's Indigent Hospitalization Program (73 per 100,000 population) some 2,555 persons over 65 *must be* entered into a general hospital each year. The latest figures for this Program showed that of the 284 who needed to be hospitalized, 47 were for malignancy, 24 for diseases of the nervous system, 51 for those of the circulatory system, 39 for disease of the gastrointestinal tract and 32 for injuries and poisonings. Beyond these there are many more above age 65 who enter the hospital for diagnostic examinations and for operations of election. Figures are not available for Tennessee in this area of medical care. However, on the basis of national figures, though the above chronic conditions occur more often in the aged, acute conditions occur no more frequently than in the younger age groups[2] in an incidence of acute disease per 100 persons—upper respiratory disease 55.6 for ages 45 to 64 and 54.9 for ages 65 and over, other respiratory diseases 28.9 and 26.7 respectively, for all acute conditions 142.7 for ages 45 to 64 and 133.9 for age 65 and over.

Last month it was pointed out that under the Indigent Hospitalization Program the length of hospitalization for those over 65 was 15 days, in contrast to 7 to 9 days under age 44 years. National figures also indicate similar figures—15 days for those over 65 and 8.4 days for younger people. However, the U. S. Public Health figures indicate that 10% of the aged, remaining for 31 days or longer, account for 39% of the total days in the hospital for the aged group. This 10% also account for 38% of the expenditure for hospitalization.

This is the picture of disability or disease in the aged and one must always differentiate these categories. Certain disabilities have relatively little connotation in terms of medical care,—visual troubles, disabling osteoarthritis, residual hemiplegia, mental deterioration—are irremedial but are com-

monly used to "load" figures on *disease* in the aged.

We must now match the health picture with the economic one. Among the 301,000 Tennesseans aged 65 or over in 1960, were 94,442 couples (the men aged 65 or more) whose average income was of $1,967,—51% thus having incomes of less than $2,000, 66% incomes less than $3,000 and 10% with incomes above $7,000. Among the single persons 97,526 had incomes of less than $1,500.

There is then a large segment of Tennessee's aged population in need of assistance during illness. Under the present ceilings of the Kerr-Mills program (Medical Assistance to the Aged,—MAA) 140,000 persons are estimated to be eligible for help (as of November 1963)—$1,300 for single persons and $1,800 for married couples. (By the end of December 1963, 22,688 applications had been approved.)

Under MAA, expenditures for the calendar year 1962 amounted for hospitalization to $405,231.90, for drugs $52,411.70, and $11,322.18 for nursing home care. For the calendar year 1963 expenditures for hospitalization were $957,384.43, for drugs $169,539.10 and for nursing home care $142,634.93. Individual applications approved in 1963 increased 99½% over 1962. Hospital admissions advanced 114%, while days of hospitalization increased 390% over 1962. Individuals receiving drugs increased 161% and the number of prescriptions filled rose 193%.

MAA is not the only agency giving financial assistance in the medical care of the aged. Old Age Assistance (OAA) in 1962 provided hospitalization for 9,405 patients at a cost of $838,473.77 and nursing home care for 16,378 at a cost of $210,864.88. During this year OAA recipients were an average of 50,638 per month at a total cost of $27,649,848.50.[3]

There are about 100,000 Tennesseans over age 65 (head of family) with incomes over $3,000, some 30,000 having incomes of over $7,000. In Tennessee, the Health Insurance Association of America estimated that at the end of 1961 49%, or just over 147,000 persons over 65 had voluntary health insurance, the majority probably falling into the third of the oldsters with incomes of $3,000 or more.

The total number of persons in Tennessee collecting monthly benefits under the Social Security Act at the end of 1961 was 313,485; this includes children, widows, and the disabled. The ones drawing old age benefits totaled 152,614 and monthly payments amounted to $9,608,453.[4]

The crucial question to which we would like to know the answer is what percentage of those receiving old age benefits under Social Security fall beneath the ceilings of aid under the MAA program and what percentage fall into the $3,000 or more per year income—the group which carries voluntary health insurance or pays its own bills without help.

This is the crux of the type of *class legislation* represented by the King Anderson Bill—aid to a selected segment of the population many of whom have financial security and a callous disregard for that large segment of our people needing the assistance given by the Kerr-Mills program. The irony of it all is that Tennesseans who now are earning $4,800 and pay $174 annually in Social Security taxes under the present law, are scheduled to pay $222 in 1968. By 1965 they will pay $198,000,000. If, however, King Anderson became law they would contribute $216,700,000 to pay for medical aid to Social Security recipients irrespective of their ability to pay. It is doubly ironical when governmental statistics from 21 urban areas show that the average income after taxes is for households of all ages $3,120 per family (household of 3.1) or $1,974 per person, and for age 65-74, $4,201 for a household of 1.9 persons or $2,223 per person.[5] This is aside from the fact the living expenses of the aged are obviously less than for younger persons.

Many aged persons need assistance in the costs of medical care, and we must provide it, but citizens should keep these needs in perspective. This summary may help when "educating" laymen and/or legislators.

R. H. K.

References

1. Editorial: Disease and Disability Among the Aged. J. Tennessee M.A. 57:75, 1964.

2. Health Statistics,—Hospital Discharges and Length of Stay: Short-stay Hospitals, U. S. 1958-1960, USPHS (HEW).

3. Statement of the T.M.A. to the Ways and

Means Committee of the House of Representatives on H.R. 3920, 88th Congress. J. Tennessee M.A. 56:489, 1963.

4. Social Security Bulletin, Annual Statistical Supplement, 1961. Washington, D. C. Government Printing Office.

5. Consumer Expenditure Survey, (1960-61), U. S. Bureau of Labor Statistics. No. 237-1 through 237-21.

DEATHS

Dr. Alexander Roscoe McCullough, Knoxville, 72, died January 28th at St. Mary's Hospital.

Dr. Kelly Smythe, Bemis, 82, died January 30th at Webb-Williamson Hospital.

Dr. G. M. Allison, formerly of Lebanon, died November 25th in Ladonia, Texas.

PROGRAMS AND NEWS OF MEDICAL SOCIETIES

Chattanooga-Hamilton County Medical Society

The Chattanooga Area Heart Association, in cooperation with the Chattanooga-Hamilton County Medical Society sponsored the 13th Annual Heart Symposium on February 6th. Three nationally known doctors were among those addressing the meeting. They were: Dr. Richard Krause of Washington University, St. Louis; Dr. Benjamin Manchester, Washington, D. C.; and Dr. James W. Wood, University of North Carolina School of Medicine, Chapel Hill. More than 250 persons attended the annual one-day heart symposium for physicians and lay persons.

A dinner meeting of the Society was conducted at the Patten Hotel on March 3rd. The scientific program was presented by Dr. L. Spires Whitaker who spoke on the subject "Bronchiectasis"; and a case report by Dr. John J. Killeffer. Dr. Jerry T. Francisco, Chief Medical Examiner, State of Tennessee, discussed "Tennessee Coroner's System."

Bradley County Medical Society

A countywide disaster meeting was sponsored by the Bradley County Medical Society and Bradley Memorial Hospital on February 1st at the Agricultural Building in Clevelend. Dr. Billy N. Golden of Kingsport, who was in charge of medical staff functions in a recent disaster at Tennessee Eastman Corporation, and Dr. James Allen of Cleveland who also was a member of the disaster team at the Holston Valley Community Hospital, were principal speakers.

Nashville Academy of Medicine Davidson County Medical Society

A business meeting of the Society was conducted in the Medical Auditorium of Baptist Hospital on March 10th. Programs, policies and activities of the Academy were discussed and considered, and members of the Academy were given an opportunity to present suggestions and opinions.

Memphis-Shelby County Medical Society

The Memphis and Shelby County Medical Society met in regular session in the auditorium of the Institute of Pathology on Tuesday, March 3rd. The theme of the program was "The Retirement Trust After Three Years." Dr. Wm. T. Satterfield, Sr. gave the "History and Status" of the society's insurance program; Dr. W. K. Turley reported on "Accumulation of Assets"; Mr. Denby Brandon discussed "Pension Life Insurance"; and Dr. Finis Taylor discussed "Maturity Options."

The House of Delegates session was held at 8:00 P.M.

Knoxville Academy of Medicine

Members of the Society heard Dr. George Murray speak on the subject, "What Constitutes Valid Medical Consent?" at the regular monthly meeting on February 11th in the Academy of Medicine Building.

Roane-Anderson County Medical Society

Dr. Robert Chanock, Head of the Respiratory Virus Unit, Laboratory of Infectious Diseases, Bethesda, Maryland, was guest speaker at the dinner meeting of the Society on February 25th at Oak Ridge Hospital. His subject was "Primary Atypical Pneumonia—Recent Clinical and Virological Advances." A business meeting followed the dinner at 8:30 P.M.

NATIONAL NEWS

The Month in Washington

(From the Washington Office, AMA)

A finding by a special Federal government committee of physician and scientist experts that cigarette smoking is a serious health hazard gave impetus to further research with the objectives of determining the harmful factors in smoking and eliminating them.

The House of Delegates of the American Medical Association had authorized a basic research program into smoking and health before the special committee's report was made public in January. The House Agriculture Committee approved legislation authorizing a Federal research program into how to make cigarettes safe. The Johnson Administration included in its fiscal 1964-65 budget an appropriation request for $5 million for research on smoking.

The 10-member Advisory Committee to the Surgeon General of the Public Health Service reached the unanimous conclusions that:

"Cigarette smoking is a health hazard of sufficient importance in the United States to warrant appropriate remedial action. . . .

"In view of the continuing and mounting evidence from many sources, it is the judgment of the committee that cigarette smoking contributes substantially to mortality from certain specific diseases and to the overall death rate. . . .

"Cigarette smoking is causally related to lung cancer in men: the magnitude of the effect of cigarette smoking far outweighs all other factors. The data for women, though less extensive, point in the same direction."

Dr. Edward R. Annis, president of the American Medical Association, urged "the American people to give careful and thoughtful attention to this report and to the strong evidence linking smoking to cancer and other diseases."

"It should be noted that the report indicates that further research could be valuable and, in this connection, Surgeon General Luther L. Terry expressed approval of the American Medical Association's comprehensive long-range program of basic research on tobacco and health, which was announced last December," Dr. Annis said.

"Despite the strong evidence against smoking which has been amassed in this report, it is unrealistic to assume that the American people are suddenly going to quit smoking. Because people will continue to smoke, research efforts should try to find how tobacco smoke affects health and, if possible, to eliminate whatever element in the smoke that may induce disease.

"This is what we hope to do through the AMA research project on tobacco and health."

Three members of the Surgeon General's Advisory Committee were named to the five-member committee that will direct the American Medical Association Education and Research Foundation's long-range program of research on tobacco and health. They are:

Maurice H. Seevers, M.D., Ph.D., chairman of the Department of Pharmacology at the University of Michigan Medical School and named chairman of the AMA-ERF committee; John B. Hickman, M.D., chairman of the Department of Internal Medicine at the University of Indiana Medical School, and Charles LeMaistre, M.D., professor of internal medicine, Southwestern Medical School.

The other two members of the AMA-ERF committee are Paul S. Larson, Ph.D., chairman of the Department of Pharmacology at the Medical College of Virginia, and Richard J. Bing, M.D., chairman of the Department of Medicine, Wayne State University College of Medicine.

The AMA Board of Trustees made an initial appropriation of $500,000 for the research program, and announced contributions would be accepted from other foundations, industry, voluntary health associations, physicians and other sources—but only if given without restrictions.

On the clear understanding that there were absolutely no restrictions attached, a contribution of $10 million was accepted from six tobacco companies. These funds will be made available over a five-year period as needed.

The first remedial action advanced by the Federal government was new cigarette ad-

vertising regulations proposed by the Federal Trade Commission. The rules, subject to modification after open hearings in March, would require that in all cigarette advertising or labeling:

There be a clear warning that cigarette smoking may cause death; there be no implication that cigarette smoking promotes good health or physical well-being, and there be no claim that smoking one brand is less harmful than smoking another. The Federal government banned the distribution of free cigarettes in Public Health Service, military, Indian and Veterans Administration hospitals. The government also launched educational campaigns pointing out the hazards of smoking to patients in the hospitals.

Highlights of the advisory committee report included:

CANCER BY SITE

Lung Cancer

"The risk of developing lung cancer increases with duration of smoking and the number of cigarettes smoked per day, and is diminished by discontinuing smoking.

"The risk of developing cancer of the lung for the combined group of pipe smokers, cigar smokers, and pipe and cigar smokers, is greater than for non-smokers, but much less than for cigarette smokers."

Oral Cancer

"The causal relationship of the smoking of pipes to the development of cancer of the lip appears to be established."

Cancer of the Larynx

"Evaluation of the evidence leads to the judgment that cigarette smoking is a significant factor in the causation of laryngeal cancer in the male."

NON-NEOPLASTIC RESPIRATORY DISEASES, PARTICULARLY CHRONIC BRONCHITIS AND PULMONARY EMPHYSEMA

"Cigarette smoking is the most important of the causes of chronic bronchitis in the United States, and increases the risk of dying from chronic bronchitis. . . .

"For the bulk of the population of the United States, the importance of cigarette smoking as a cause of chronic bronchopulmonary disease is much greater than that of atmospheric pollution or occupational exposures. . . .

"Cigarette smoking does not appear to cause asthma."

CARDIOVASCULAR DISEASE

"Smoking and nicotine administration cause acute cardiovascular effects similar to those induced by stimulation of the autonomic nervous system, but these effects do not account well for the observed association between cigarette smoking and coronary disease. . . . It is more prudent to assume that the established association between cigarette smoking and coronary disease has causative meaning than to suspend judgment until no uncertainty remains."

Maternal Smoking and Infant Birth Weight

"Women who smoke cigarettes during pregnancy tend to have babies of lower birth weight.

"Information is lacking on the mechanism by which this decrease in birth weight is produced. "It is not known whether this decrease in birth weight has any influence on the biological fitness of the newborn."

MEDICAL NEWS IN TENNESSEE

University of Tennessee College of Medicine

Dr. L. W. Diggs, member of the faculty since 1929, has been named acting chairman of the department of medicine. He succeeds Dr. I. Frank Tullis who recently was appointed director of the clinical research center of the William F. Bowld Hospital.

★

Dr. Neuton S. Stern, heart specialist and faculty member since 1920, has been promoted to clinical professor of medicine emeritus. Dr. Stern has long been recognized as an outstanding cardiologist of the South.

★

Seventeen members of the staff of the University of Tennessee College of Medicine have been promoted. Those promoted and their new ranks are: Dr. James G. McClure, clinical instructor, Dr. Allen S. Ed-

monson, clinical instructor, Dr. George B. Higley, Sr., associate clinical professor, and Dr. Moore Moore, Jr., associate clinical professor, all in orthopedic surgery; Dr. Joseph M. Scott, clinical instructor, and Dr. Charles M. King, associate clinical professor, in ophthalmology; Dr. Eugene Jabbour, clinical instructor, surgery; Dr. Eugene W. Fowinkle, clinical instructor, preventive medicine; Dr. Jefferson D. Upshaw, assistant clinical professor, and Dr. Clifford Argall, clinical instructor, in clinical pathology; Dr. Wade T. Murdock, instructor, Dr. J. R. Thomas, assistant professor, and Dr. Murray L. Fields, assistant professor, in medicine; Dr. William E. Sheffield, clinical instructor, Dr. George L. Miller, clinical instructor, Dr. Robert E. Lawson, clinical instructor, and Dr. Ray G. Stark, assistant clinical professor, in anesthesiology.

Sixteen physicians have been appointed to the staff: Dr. Omar Hustu, associate professor of radiology; Drs. Melvyn A. Levitch, Stanley H. Tyler and William C. Godsey, instructors in psychiatry; Dr. George K. Tokuhata, assistant professor of preventive medicine; Drs. Frances C. Walker, T. R. Harris, Donald T. Harris, Arthur W. Gregory, Jr., Nancy C. Flowers and Harry Blumenfeld, all instructors in medicine; Dr. H. B. Eason, clinical instructor in hematology and laboratory medicine; Dr. Jerome Levy, clinical instructor in dermatology; Dr. Robert Troop, assistant professor in medicine; Dr. John W. Nelson, associate professor in neurology; and Dr. James H. Price, assistant professor in anesthesiology.

★

Three members of the staff of the department of surgery are the authors of a textbook for medical students, "The Science of Surgery," published by McGraw-Hill Publishing Company of New York. They are Drs. Edward H. Storer, James W. Pate and Roger Sherman, all associate professors of surgery.

★

Of 3,636 licensed physicians now practicing in Tennessee, 1,906 or 52 percent, are graduates of the University of Tennessee. The number of licensed physicians in the state increased 30% from 1950 to 1963, far ahead of the population gain of 11 percent. In 1950, there was one physician for every 1,183 persons in the state, compared with one for every 1,005 persons in 1963.

St. Jude Hospital, Memphis

A $56,377 research grant for study of virus reproduction and genetics has been awarded to St. Jude Research Hospital by the Federal Government's National Institute of Allergy and Infectious Diseases. The grant will permit continuation of research in progress on reproduction and genetics of myxoviruses, a group which includes the influenza virus. Dr. Allan Granoff, St. Jude Hospital virologist and Associate Professor of Microbiology at the UT Medical Units, is directing the research work.

Dr. Granoff was one of 25 scientists from over the world selected to attend a symposium on virus infections in London. The symposium was sponsored by the Ciba Foundation to promote international cooperation in medical and chemical research. It dealt with a group of viruses including those which produce flu, mumps, measles and respiratory infections in man and animals.

Memphis Eye, Ear, Nose and Throat Convention

Several outstanding specialists in ophthalmology and otolaryngology gave lectures at the Memphis Eye, Ear, Nose and Throat Convention, February 8-10, at the Peabody Hotel in Memphis. More than 100 physicians who specialize in these fields heard lecturers discuss cataract operations, inflammation of the middle ear, glaucoma and benign tumors of the neck. Speakers included: Dr. Bernard Becker of St. Louis; Dr. John S. McGavic of Philadelphia; Dr. John M. McLean of Ithaca, N. Y.; Dr. Philip E. Meltzer of Cambridge, Mass.; Dr. F. J. Putney of Philadelphia, Pa.; and Dr. Ben H. Senturia of St. Louis.

Nashville Selected for Immunization Survey

Nashville was one of four cities in the U. S. selected to be surveyed in connection with community immunization programs. The study is conducted under the sponsorship of the state and metropolitan health

agencies in cooperation with the Communicable Disease Center and the U. S. Public Health Service. Other cities are Chicago, Salt Lake City and San Jose, California. The purpose of the survey is to determine the number of pre-school children who have been immunized against smallpox, diphtheria, whooping cough, tetanus and polio. Interviewers, visiting 1,760 Nashville homes, will also ask adults in the household if they have been immunized against the same diseases.

Meharry Medical College

A $10,000 grant to Meharry Medical College for cancer research has been made by the Damon Runyon Memorial Fund for Cancer Research, Inc. The grant was the seventh of its kind awarded by the Runyon Foundation to a Meharry cancer research team headed by Dr. Horace Goldie, professor of surgery and director of the Experimental Oncology Laboratory.

PERSONAL NEWS

Dr. David S. Carroll, Memphis, has been installed as president of the American College of Radiology.

Dr. Crawford Adams and **Dr. Fred Ownby**, Nashville, were speakers at a meeting of the Tom Moore Chapter of the Academy of General Practice in Cookeville on February 27th. Dr. Adams' subject was "Recent Advances in Diagnoses and Treatment of Cardiac Arrhythmias" and Dr. Ownby spoke on "Electrocardiographic Diagnosis of Chest Pain."

Dr. Walter Puckett, III, has become associated with **Dr. Fred B. Ballard, Jr.** in the practice of internal medicine in Nashville.

Dr. Armando de Vega, Chattanooga, has been named diplomate by the American Board of Pathology.

Dr. Blair Erb, Jackson, was guest speaker at the Selmer Lions Club on February 11.

Dr. Jimmy B. Davis has returned to Chattanooga after two years service in the U. S. Army and will rejoin **Dr. James W. Hedden** in the general practice of medicine.

Dr. Morse Kochtitzky, Nashville, has been appointed chairman of the Doctor's Division of the 1964 Heart Fund campaign in Davidson County.

Dr. Jacob T. Bradsher, Jr., Knoxville, was guest speaker at the annual heart fund dinner in Newport on February 11.

Dr. Lamb B. Myhr, Jackson, has been named chief of the Jackson-Madison County General Hospital medical staff. **Dr. William G. Crook** has been named assistant chief of the medical staff.

Dr. Frank London, Knoxville, has been installed as a Fellow in the American College of Cardiology.

Dr. John Lillard addressed the Athens Rotary Club recently.

Dr. Joseph Austin King has opened his office for the practice of medicine in Kingsport.

Dr. James A. Kirtley, Jr., Nashville, is the new president of the doctors' staff at St. Thomas Hospital. Other new officers are **Dr. D. Scott Bayer**, president-elect, and **Dr. William H. Edwards**, secretary-treasurer.

Dr. Kenneth Kaufman, Murfreesboro, discussed King-Anderson legislation at a recent meeting of the local Rotary Club.

Dr. Jerry E. Puckett has joined **Dr. Kenneth Twilla** in the practice of medicine in Smithville.

Dr. W. N. Jernigan, Columbia, has been named Maury County's outstanding young man of 1963 by the Columbia Jaycees.

Dr. W. A. DeSautelle, Knoxville, has been named chief of medical staff of the Fountain View Nursing Center.

Dr. Crawford Adams, Nashville, has been invited to participate in a panel discussion at the AMA meeting in San Francisco on June 22nd. His subject will be "Problems in Electrocardiography."

Dr. John L. Houston, Memphis, has been elected president of the Methodist Hospital medical staff succeeding Dr. C. D. Hawkes. **Dr. Al Smith** was re-elected secretary.

Dr. W. J. McClure, formerly of Huntingdon, is now associated with the Doctor's Clinic in Waverly and also a Clinic in New Johnsonville.

Dr. Anne U. Bolner, Fayetteville, has joined the staff of the health department as director of the Giles, Lincoln, and Moore County Health Departments.

Dr. Thomas W. Johnson, Dyersburg, discussed cardiac conditions at a recent meeting of the Tiptonville Kiwanis Club.

Dr. Benjamin P. Clark has accepted the position of Clinical Director at Greene Valley Hospital and School.

Dr. Robert D. Proffitt, Maryville, will serve as chairman of Blount County's 1964 Heart Fund Campaign.

Dr. Maurice S. Rawlings, Chattanooga, has been appointed governor for Tennessee by the American College of Cardiology.

Dr. Richard A. Obenour, Knoxville, spoke on the subject, "Smoke and Smog" before a recent meeting of the Exchange Club.

Drs. Irving Ettman and **Marvin M. Keirns**, Memphis, have been named Fellows of the American College of Radiology.

Dr. Robert H. Haralson, Maryville, has been re-elected to a three-year term on the Board of Directors of Blount Memorial Hospital.

Dr. Truett H. Pierce, Sneedville, has been

named chairman of Hancock County's 1964 Heart Fund Campaign.

Dr. J. Wesley Osborne, Hendersonville, has been elected president of Madison Hospital. **Dr. Robert J. Linn,** Nashville, is vice-president, and **Dr. Elmer Bottsford,** Ridgetop, is secretary-treasurer.

Dr. E. Wayne Gilley, Chattanooga, was a recent speaker before the Cleveland Lions Club.

Dr. Robert Smith Sanders has opened his office for the practice of medicine in Murfreesboro.

Dr. Julia E. Sawyers, Nashville, has joined Doctors E. Palmer Jones, Leslie E. Traughber, Jr. and Lawrence G. Schull in the practice of anesthesiology.

ANNOUNCEMENTS

Calendar of Meetings, 1964

State

April 1-3 —Postgraduate Course sponsored by the Department of Continuing Education of the University of Tennessee Medical Units—"Pediatric Allergy."

April 12-15 —Tennessee Medical Association Annual Meeting, Peabody Hotel, Memphis

May 21 —Middle Tennessee Medical Association, Sewanee

June 9-10 —Upper Cumberland Medical Society, Cloyd Hotel, Red Boiling Springs

Regional

March 21-28—Southeastern Surgical Congress, aboard the S.S. Hanseatic. Cruise will begin March 21, sailing from Ft. Lauderdale, Fla. and returning on March 28.

April 15-18 —West Virginia Academy of Ophthalmology and Otolaryngology, Greenbrier Hotel, White Sulphur Springs, West Virginia

April 23-25 —Medical Association of Alabama Annual Meeting, Montgomery

May 2-6 —Medical Society of the State of North Carolina Annual Meeting, Greensboro

May 3-6 —Medical Association of Georgia Annual Session, Macon

May 3-6 —Arkansas Medical Society, Arlington Hotel, Hot Springs

May 4-6 —Louisiana State Medical Society, Evangeline Hotel, Lafayette

May 5-7 —South Carolina Medical Association, Ocean Forest Hotel, Myrtle Beach

May 6-10 —Florida Medical Association, Diplomat Hotel, Hollywood-by-the-Sea

May 11-14 —Mississippi State Medical Association Annual Meeting, Jackson

National

April 1-3 —American Surgical Association, Homestead, Hot Springs, Va.

April 3-5 —American Society of Internal Medicine, Atlantic City, N. J.

April 3-5 —American Association of Pathologists and Bacteriologists, Drake Hotel, Chicago

April 6-10 —American College of Physicians, Chalfonte-Haddon Hall, Atlantic City, New Jersey

April 7-9 —American Laryngological, Rhinological and Otological Society, St. Francis Hotel, San Francisco

April 11-16 —American Academy of General Practice, Convention Hall, Atlantic City, New Jersey

April 13-16 —American Radium Society, Greenbrier Hotel, White Sulphur Springs, West Virginia

April 27-29 —American Association for Thoracic Surgery, Queen Elizabeth Hotel, Montreal

May 4-8 —American Psychiatric Association, Biltmore Hotel, Los Angeles

May 11-14 —American Urological Association, Penn-Sheraton Hotel, Pittsburgh

May 17-22 —American College of Obstetricians and Gynecologists, Americana Hotel, Bal Harbour, Florida

May 25-27 —American Gynecological Society, The Homestead, Hot Springs, Va.

May 28-30 —American Ophthalmological Society, Homestead Hotel, Hot Springs, Va.

June 18-22 —American College of Chest Physicians, Jack Tar Hotel, San Francisco

June 21-25 —American Medical Association, Fairmont and Mark Hopkins Hotels and Civic Auditorium, San Francisco

The American Academy of General Practice

Family doctors from all parts of the U. S. will gather in Atlantic City April 13-16, for the 16th Annual Scientific Assembly of the American Academy of General Practice. The theme of the 1964 Assembly will be "The Family in Medical Perspective" an extension of a comprehensive program called "Perspectives in Medicine," which was inaugurated at Chicago in 1963. More than 4,000 doctors, their families and ancillary medical persons are expected to attend the meeting that will feature 31 speakers and more than 110 scientific exhibits in Atlantic City's Convention Hall.



Young Woman
Reading a Letter

JOHANNES VERMEER
1632-1675

In Pregnancy...

METAMUCIL® Acts Gently, Safely, Effectively

brand of psyllium hydrophilic mucilloid

The highly refined mucilloid of Metamucil corrects constipation in pregnant patients simply by augmenting the natural stimulus to peristalsis.

The bland, smooth bulk provided by Metamucil softens hard fecal masses, stimulates natural reflex activity of the intestinal musculature without irritant or systemic effects and tends to restore the normal rhythms of elimination.

Average Adult Dosage: One rounded teaspoonful of Metamucil powder (or one packet of Instant Mix Metamucil) in a glass of cool liquid. Metamucil powder contains equal amounts of refined, purified psyllium and dextrose furnishing 14 calories and is available in containers of 4, 8 and 16 ounces.

Instant Mix Metamucil is supplied as individual single-dose packets, each incorporating 0.25 Gm. of sodium, in cartons of 16 and 30.

G. D. SEARLE & CO.
CHICAGO, ILLINOIS, 60680
Research in the Service of Medicine

REFER EYE PATIENTS
TO AN
EYE PHYSICIAN

By so doing, you will be assured of a complete diagnosis of your patients' eyes.

Guild Opticians complete the cycle for Professional Service.

GUILD OF PRESCRIPTION OPTICIANS OF AMERICA

BE SAFE—BE SURE

SEE

YOUR GUILD OPTICIAN

FOR

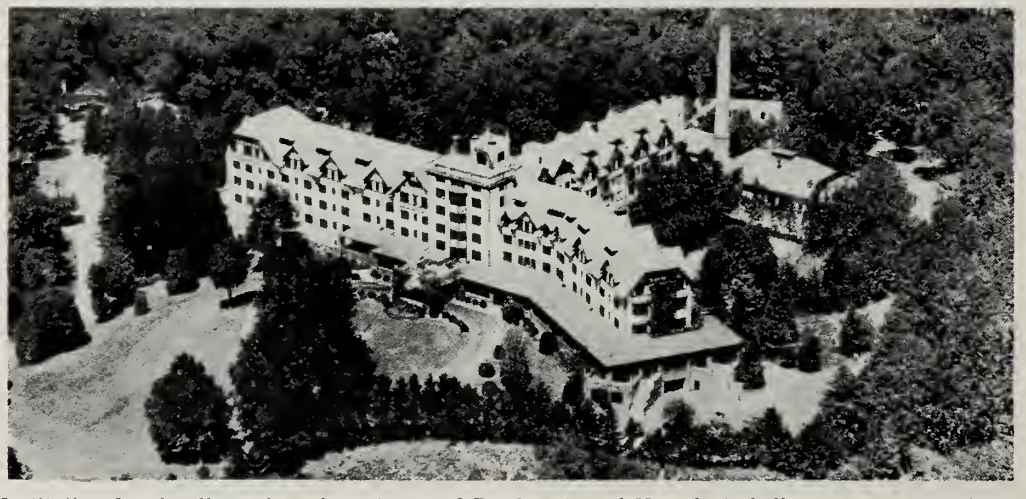
THE BEST SERVICE

EYE PHYSICIANS: Please Note—

Your prescriptions for glasses are "SAFE" when referred to a Guild Optician. Bound by the code of Ethics to uphold the highest standards in optical service.

APPALACHIAN HALL
Established 1916

Asheville North Carolina



An Institution for the diagnosis and treatment of Psychiatric and Neurological illnesses, rest, convalescence, drug and alcohol habituation.
Insulin Coma, Electroshock and Psychotherapy are employed. The Institution is equipped with complete laboratory facilities including electroencephalography and X-ray.
Appalachian Hall is located in Asheville, North Carolina, a resort town, which justly claims an all around climate for health and comfort. There are ample facilities for classification of patients, rooms single or en suite.

WM. RAY GRIFFIN, JR., M.D. MARK A. GRIFFIN, SR., M.D.
ROBERT A. GRIFFIN, M.D. MARK A. GRIFFIN, JR., M.D.

For rates and further information write
Appalachian Hall, Asheville, N. C.



NEO-VADRIN
FOR NASOSINUSITIS

NEO-VADRIN is the deep nasal decongestant that restores drainage and ventilation of all eight sinuses by opening up the obstructed ostia.

The therapeutic effect is both prompt and prolonged. Hence Neo-Vadrin is ideal for treatment of deep nasal and sinus congestion due to head colds, hay fever, vasomotor rhinitis, nasal allergy, and sinusitis.

In addition, Neo-Vadrin is antiseptic and locally anesthetic. May be used by patients of all ages.

[1]**Sollmann's Manual of Pharmacology,** 8th ed., 1957, p. 507.
[2]**Modern Drug Encyclopedia,** 7th ed., 1958, p. 757.

NEO-VADRIN CONTAINS:

dl-Norephedrine HCl	0.4%
Phenylephrine HCl	0.15%
Chlorobutanol	0.15%
Benzalkonium Chloride	0.005%

The more prolonged action of dl-norephedrine[1] combined with promptly effective phenylephrine[2] provides a long span of hours for more satisfactory therapeutic response.

Supplied in 1 fld. oz. dropper bottles with special nasal applicator and ¾ oz. plastic spray bottles.

Samples are available to physicians upon request. Please make your request on your prescription sheet or letterhead.

First Texas *Pharmaceuticals, Inc.*
DALLAS • SINCE 1901

Tennessee Medical Association's

Exclusively Approved

GROUP DISABILITY INCOME PROGRAM

Administered By

Smith, Reed, Thompson & Ellis Co.

1322 Nashville Trust Building
NASHVILLE 3, TENNESSEE
Phone 255-7625

WILLIAM H. ELLIS, C. L. U. MGR.
THOMAS G. HENRY

ASSOCIATES

Alden H. Smith, C. L. U.

Arthur D. Reed, C. L. U.

Joe Thompson, Jr., C. L. U.

Alden H. Smith, Jr., C. L. U.

E. Dan Smith, II

Underwritten By

Commercial Insurance Company

Newark, New Jersey

CITY VIEW SANITARIUM

For the diagnosis and treatment of nervous and mental disorders, and addictions to alcohol and drugs.

Established 1907

JOHN W. STEVENS, M.D.

Founder

NASHVILLE, TENNESSEE

Remember, Doctor—

It's been

Tafel Surgical Supply Co., Inc.

SINCE 1889

for

Drugs, Orthopedic, Surgical

Supplies & Equipment

1203 Church Street

Nashville, Tennessee

Murfreesboro—Vacancies

STAFF PHYSICIANS for 1275 bed neuro-psychiatric hospital, including 350 general medical and geriatric. Modern facilities for diagnosis and treatment of mental illness. Salary $11,150 to $18,405 depending on qualifications; fringe benefits; cost of moving to Murfreesboro will be paid by Veterans Administration; visit here for evaluation can be arranged at our expense. Excellent educational opportunities for students in this area. Contact—Director, Veterans Administration Hospital, Murfreesboro, Tennessee.



Whether you're a teacher correcting exams. A student cramming for them. A housewife cleaning up after the kids. Or a businessman working late at night. Whoever you are, things go better when you pause and refresh with ice-cold Coca-Cola.

New Canaan Connecticut

The Silver Hill Foundation for the care and treatment of the psychoneuroses, offers Senior and Junior physicians an opportunity to practice psychiatry in a pleasant community, forty miles from New York. Professional freedom and a challenging opportunity to assume clinical and administrative responsibility. Teaching opportunities. Accredited Three Year Residency.

Interesting compensation and supplemental benefits. Excellent schools; minutes to beaches or mountain lakes.

Address:

William B. Terhune, M.D.
Medical Director
The Silver Hill Foundation
Box 1177
New Canaan, Connecticut
Telephone
New Canaan 966-3561

PLACEMENT SERVICE

(Continued from page 120)

GENERAL SURGEON, 33 years of age, now in residency, graduate University of Tennessee College of Medicine, would like affiliation with clinic in any part of Tennessee. Board qualified as of April 1964. Married. Protestant. Available April 1, 1964. LW-508

◆

ORTHOPEDIC-SURGEON, 31 years of age, graduate of the University of Virginia School of Medicine, now in residency, would like associate practice anywhere in Tennessee with 50,000 plus population. Married. Unitarian. Available July 1, 1964. LW-509

◆

INTERNIST, with sub-specialty in endocrinology, age 29 years, now in residency, would like any type practice in Middle or West Tennessee area with 25,000 or over population. Graduate University of Tennessee College of Medicine. Single. Methodist. Available November 1, 1964. LW-511

◆

ANESTHESIOLOGIST, age 43, graduate of the Vienna (Austria) University School of Medicine, would like assistant, associate, clinical, industrial, or educational practice in any city of Tennessee, 40,000 plus. Married. Hebrew. Available immediately. LW-512

◆

GENERAL SURGEON, age 31, graduate of the Western Reserve University School of Medicine, wants associate, clinical or solo practice in any city of Tennessee, 10,000 plus. Now in residency. Will be Board eligible upon completion. Married. Protestant. Available July, 1964. LW-514

◆

OBSTETRICIAN-GYNECOLOGIST, 31 years of age, graduate of Vanderbilt School of Medicine, would like assistant or associate practice in city in Middle Tennessee of 25,000 plus. Native Tennessean with Tennessee license. Jr. Fellow American College of Ob-Gyn. Married. Protestant. Available July, 1964. LW-516

◆

OBSTETRICIAN-GYNECOLOGIST, age 30, graduate of LSU's School of Medicine, would like assistant, associate or clinical practice in any city in Tennessee, 16,000 plus. Presently in residency. Married. Protestant. Available August 1964. LW-517

◆

GENERAL PRACTITIONER, age 33, graduate of the University of Miami School of Medicine, would like assistant, industrial, or solo practice. No preference as to size or locality. Married. Protestant. Available May, 1964. LW-518

◆

INTERNIST, 31 years of age, graduate of the Unviersity of Texas Medical Branch, would like associate practice; prefers West Tennessee but will consider other sections, of 30,000 plus population. Now in residency. Married. Hebrew. Available November, 1964. LW-519

◆

INTERNIST, with practice in Hematology-Cardiology, graduate of New York University School of Medicine, 38 years of age, would like associate, clinical, or institutional practice in Middle or West Tennessee city of 25,000 plus. Board eligible. Married. Lutheran. Available 90 days. LW-520

◆

GENERAL SURGEON, 33 years of age, graduate of the University of Tennessee College of Medicine, would like practice in East Tennessee city of 10,000 plus. Now in general practice with general surgeon. Board qualified. Married. Episcopalian. Available upon notice. LW-521

GENERAL PRACTITIONER, age 30, graduate of the University of Tennessee College of Medicine, would like associate practice in town of 4,000 plus, no preference as to location. Native Tennessean with Tennessee license. Married. Protestant. Available July, 1964. LW-522

◆

OBSTETRICIAN-GYNECOLOGIST, age 34, graduate of the University of Tennessee College of Medicine, now in residency, would like associate or group practice in any city in Tennessee of 15,000 to 400,000 population. Married. Protestant. Has Tennessee license. Available July, 1964. LW-524

◆

SURGEON, general and thoracic, age 33, graduate of the University of Tennessee College of Medicine, now in residency, would like associate, institutional or solo practice in East or Middle Tennessee city of 20,000 plus. Married. Catholic. Available July, 1964. LW-525

◆

GENERAL PRACTITIONER, age 28, graduate of the University of Cincinnati College of Medicine, now in military service, would like associate practice in East Tennessee city of 5,000 plus. Married. Protestant. Available August, 1964. LW-526

◆

GENERAL PRACTITIONER, age 28, graduate of the University of Tennessee College of Medicine, would like temporary, summer placement, preferably in Middle Tennessee area in clinical, institutional, or industrial preferred. Tennessee license. Single. Protestant. Available July 1, 1964. LW-527

Physicians Wanted

UPPER EAST TENNESSEE community in need of a general practitioner to replace former physician who has retired. Housing and office space available. Near large industrial area. PW-185

◆

GENERAL PRACTITIONER needed as associate in small East Tennessee town of approximately 1,000. Hospital located in area. Office space and equipment available. PW-192

◆

GENERAL PRACTITIONER, or Ob-Gyn, needed in Middle Tennessee town of 1,000. Well built clinic building available for office. Active support of county, town officials and civic organizations. No other physician in immediate area. PW-195

◆

FOR RENT or LEASE a fully equipped clinic to general practitioner. East Tennessee town of 4,500. Excellent opportunity. PW-197

◆

GENERAL PRACTICE available for physician in the suburb of large East Tennessee city. Office ready for immediate occupancy; or will build to suit occupant. PW-201

◆

FOR LEASE or SALE, practice and office equipment of recently deceased physician in West Tennessee city of 5,000. Office space consists of two examining rooms, two treatment rooms, laboratory, plus other essential facilities. General practice, with general surgery. PW-204

◆

PHYSICIAN, 25-40 years of age, needed for industrial medicine by large industrial concern in East Tennessee city of 180,000. Office space and equipment provided. Will assist in obtaining housing if desired. Salary and fringe benefits. Excellent position. PW-206

Is There A Doctor - - - -

WHO WANTS TO DRIVE A NEW CAR—

With No Capital Investment . . . Simplified Tax Deductions . . . Which May Save You Money . . . And No Worries About—Maintenance . . . Depreciation . . . Tires . . . Insurance . . . Or License?

Call or Visit the Lease Department of

OAK FORD SALES AND SERVICE **MOTORS**

915 FIFTH AVE. NORTH
NASHVILLE 3, TENN.

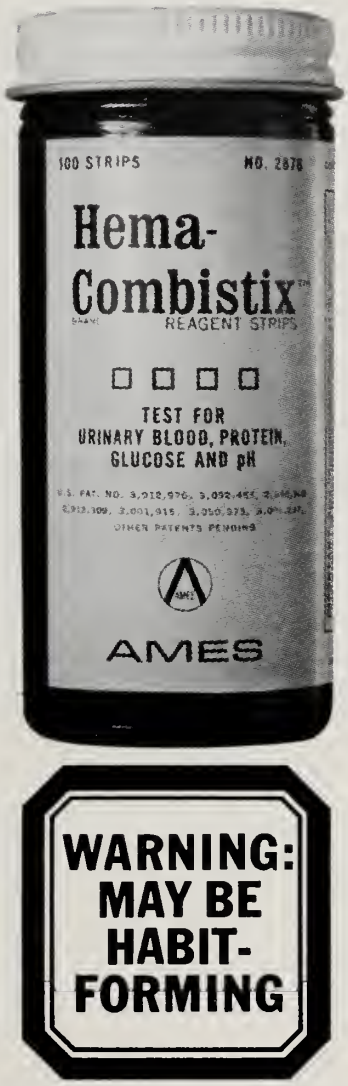
Tel. AL 5-8661

We are a member of Largest Leasing System in the U. S.

Ford AUTHORIZED LEASING SYSTEM

List of Advertisers in This Issue

American Cyanamid Company	XI, XVII	Mutual Benefit Life Ins. Co.	XXVIII
American Tobacco Company, The	XX	Nashville Surgical Supply Co., Inc.	XXIV
Ames Co., Inc.	XLI	Oak Motors	XL
Appalachian Hall	XXXII	Parke-Davis and Company	II
Baker Laboratories, Inc.	VIII, IX	Physicians Mutual Ins. Co.	XXXIV
Blood Bank Foundation	XII	Physicians Products Co.	XXIX
Brayten Pharmaceutical Company	XVIII	Robins, A. H. Co.	VII, XXI
Burroughs Wellcome & Co.	VI, XVI	Roche Laboratories	XLII
Chatham Pharmaceuticals, Inc.	XXIII	St. Albans	XXVI
City View Sanitarium	XXXVII	Searle, G. D. & Co.	XXXI
Coca-Cola	XXXVIII	Silver Hill Foundation	XXXVIII
Endo Laboratories	XV	Smith, Kline & French Laboratories	X
Farringer & Company	XXXV	Smith, Reed, Thompson & Ellis Co.	XXXVI
First Texas Pharmaceuticals, Inc.	XXXIII	Squibb	III
Geigy Pharmaceuticals	XIV	Tafel Surgical Supply Co., Inc.	XXXVII
Guild Opticians	XXXII	Thompson, M. R., Inc.	XXV
Hill Crest Sanitarium	XXII	Upjohn	XII, XIII
Kay Surgical, Inc.	XIII	Wallace Laboratories	XIX, XXIII, XXVII
Lilly, Eli and Co.	I, XXX	White Surgical Supply Co.	XXII
Murfreesboro VA Hospital	XXXVII	Winthrop Laboratories	V



Once you have used **HEMA-COMBISTIX,**™ dip-and-read test for urinary blood, protein, glucose, and pH, it may become a habit to test every patient's urine routinely with this simple, convenient reagent strip. Most of the answers will be "negatives," but an unexpected "positive" may alert you to serious pathology even before related symptoms appear. The test takes only 60 seconds. As basic as the stethoscope...**HEMA-COMBISTIX** is a *good* habit to form. □ Ames Company, Inc., Elkhart, Indiana. 68764

AMES
AMES

LIBRIUM®
(chlordiazepoxide
the successor
to the tranquilizers

ROCHE

In prescribing: Dosage—Adults: Mild to moderate anxiety and tension, 5 or 10 mg t.i.d. or q.i.d.; severe states, 20 or 25 mg t.i.d. or q.i.d. patients: 5 mg b.i.d. to q.i.d. Cautions—Occasional side effects, often dose-related, are drowsiness, ataxia, minor skin rashes, menstrual irre nausea and constipation. Paradoxical reactions may occasionally occur in psychiatric patients. Individual maintenance dosages should be de Advise patients against possibly hazardous procedures until maintenance dosage is established. Though compatible with most drugs, use car bining with other psychotropics, particularly MAO inhibitors or phenothiazines; warn patients of possible combined effects with alcohol. Obse precautions in impaired renal or hepatic function, and in long-term treatment. Caution should be exercised in prescribing any therapeutic pregnant patients. Supplied—Capsules, 5 mg, 10 mg and 25 mg, bottles of 50 and 500.

LIBRARY OF THE RHODE ISLAND MEDICAL SOCIETY

THE JOURNAL OF THE TENNESSEE MEDICAL ASSOCIATION

MIDDLE TENNESSEE MEDICAL ASSOCIATION
139th Semi-Annual Meeting—MAY 21, 1964
Claramont Inn, Sewanee, Tennessee

UPPER CUMBERLAND MEDICAL SOCIETY
Cloyd Hotel, Red Boiling Springs, Tennessee
June 9-10, 1964

APRIL, 1964

Volume 57 **Number 4**

Contents on Page IV
Advertisers on Page XLII

AMYTAL TAKES THE EDGE OFF DAYTIME ANXIETY AND TENSION

Amytal is a moderately long-acting barbiturate that takes the edge off daytime anxiety and tension without significant change in mood and attitude. Since Amytal is metabolized in the liver within twenty-eight hours, overlapping of effect is minimized, and renal damage does not constitute a contraindication.

Side-Effects: Idiosyncrasy or allergic reactions to the barbiturates may occur.

Precautions and Contraindications: Amytal should be used with caution in patients with decreased liver function, since a prolongation of effect may occur. Administration in the presence of uncontrolled pain may produce excitement. WARNING—May be habit-forming.

Dosage: Doses should be individualized for each patient. The usual adult sedative dosage ranges from 30 mg. (1/2 grain) to 50 mg. (3/4 grain) two or three times daily.

Additional information available upon request. Eli Lilly and Company, Indianapolis 6, Indiana.

AMYTAL® AMOBARBITAL

Lilly

400152



epilepsy may limit opportunity...



Dilantin®
(diphenylhydantoin)

PARKE-DAVIS

extends horizons

This agent "...has brought new hope to an entire generation of seizure patients....With judicious use, it may be said that it alone is responsible for the prevention of more seizures than any other drug."*

DILANTIN (diphenylhydantoin) can help your epileptic patient to earn a livelihood...to prove his worth...and to share in the daily give-and-take as a full-fledged member of the workaday world.

Indications: Grand mal epilepsy and certain other convulsive states.

Precautions: Toxic effects are infrequent: allergic phenomena such as polyarthropathy, fever, skin eruptions, and acute generalized morbilliform eruptions with or without fever. Rarely, dermatitis goes on to exfoliation with hepatitis, and further dosage is contraindicated. Eruptions then usually subside. Though mild and rarely an indication for stopping dosage, gingival hypertrophy, hirsutism, and excessive motor activity are occasionally encountered, especially in children, adolescents, and young adults. During initial treatment, minor side effects may include gastric distress, nausea, weight loss, transient nervousness, sleeplessness, and a feeling of unsteadiness. All usually subside with continued use. Megaloblastic anemia, aplastic anemia, leukopenia, granulocytopenia and pancytopenia have been reported. Nystagmus may develop. Nystagmus in combination with diplopia and ataxia indicates dosage should be reduced. Periodic examination of the blood is advisable.

DILANTIN (diphenylhydantoin sodium) is supplied in several forms including Kapseals® containing 0.1 Gm. and 0.03 Gm.

*Roseman, E.: *Neurology* 11:912, 1961. 33664

PARKE-DAVIS

PARKE, DAVIS & COMPANY, Detroit, Michigan 48232

For that extra bit of knowledge which may offer you the key to a puzzling diagnostic or therapeutic problem . . .

SAUNDERS PRACTICAL "SPECIALIZED" VOLUMES

NEW! Avery — The Lung and its Disorders in Newborn Infants

This is Volume I of a new monograph series, "Major Problems in Clinical Pediatrics." Each volume will take a significant problem facing pediatricians today and exhaustively delineate current knowledge about the disorder and how it may best be managed. Other volumes scheduled in addition to the one below will cover Jaundice, Severe Infections, and Hypoglycemias. Consulting Editor of the Series—Alexander J. Schaffer, M.D.

The Lung and its Disorders in Newborn Infants exemplifies the entire series. Dr. Avery first draws a superb picture of the significant anatomic and physiologic aspects of fetal and neonatal respiration. She follows this with clinical, up-to-the-minute assessment of respiratory distress—in disorders ranging from *choanal atresia* to *pulmonary hemorrhage*. You'll find a wealth of practical, well-illustrated advice on *management of hyaline membrane disease, on differential diagnosis of the various respiratory abnormalities, on resuscitation of the asphyxiated newborn, on data showing normal lung volumes in infants, and on recognition of both normal and abnormal chest films.* Here is a complete, definitive picture in one single source.

By Mary Ellen Avery, A.B., M.D., Assistant Professor of Pediatrics, Johns Hopkins School of Medicine; Pediatrician-in-charge, Newborn Nurseries, Johns Hopkins Hospital. About 225 pages, 6⅛" x 9¼", illustrated. About $7.50.

New—Just Ready!

NEW (3rd) EDITION! Cecil-Conn — The Specialties in General Practice

In this *New (3rd) Edition* outstanding specialists pinpoint important clues to diagnosis and effective treatment for those diseases and conditions of a specialized nature that are often encountered by the non-specialist. You'll find precise, specific information to help you in successful management of patients with diseases of the *bladder and kidney; anorectal diseases; ophthalmologic disorders; neuroses and psychoses; etc.* For each disorder you'll find information on normal anatomy, physiology, differential diagnosis, treatment, complications, pathologic physiology, dietary regimens, therapeutic schedules, etc. Danger points are carefully pointed out—those symptoms and findings which demand immediate referral for special management. For this *New (3rd) Edition* there are new contributors for the sections on *Surgery, Orthopedic Trauma; Gynecology and Obstetrics; Nose and Throat; Larynx, Bronchi and Esophagus; and Otology.* In addition, entirely new chapters give you extra help on using the clinical laboratory more effectively, and on problems met by the general practitioner in industrial medicine.

By 15 Outstanding Specialists. Edited by Russell L. Cecil, M.D., Professor of Clinical Medicine, Emeritus, Cornell University Medical College; and Howard F. Conn, M.D., Editor, Annual *Current Therapy* Volume. About 832 pages, 7" x 10", with about 247 illustrations. About $19.00.

New (3rd) Edition—Ready May!

NEW! Stoddard — Case Studies in Obstetrics and Gynecology

Here is a stimulating new book based on the case-study method of instruction. It will aid you greatly in management of virtually all the important problems encountered in the practice of obstetrics and gynecology. 60 problems are discussed, ranging from *premenstrual tension* to *Rh isoimmunization*. Dr. Stoddard begins each discussion with a typical case history, describing symptoms and signs, results of the physical examination and laboratory tests, type of treatment offered, and long-term results. Next you'll find a thoughtful discussion in which that particular type of disorder is described as to incidence, pathology, prognosis, etc. Then follows a series of provocative questions (the type a consultant would be asked) with sensible answers on pathology, type of treatment prescribed, alternative methods of treatment, effectiveness of therapy, etc. You'll welcome the advice set forth on such vital disorders as: *early abortion; cancer and pregnancy; dysmenorrhea; adrenal virilism; carcinoma in situ of the cervix; toxemia of pregnancy; obstetrical anesthesia accident; etc.* This valuable new book will help you screen important from unimportant aspects of a case, help you avoid a stereotyped approach to management, give you details of unusual cases you may not yet have encountered.

By F. Jackson Stoddard, M.D., Associate Clinical Professor of Obstetrics and Gynecology, Marquette University School of Medicine, Milwaukee, Wisconsin. 312 pages, 6⅛" x 9¼", illustrated. About $10.00.

New—Just Ready!

SJG4-64

W. B. SAUNDERS COMPANY West Washington Square, Phila. 5, Pa.

Please send and bill me:

☐ Avery—*Lung in Newborn*. About $ 7.50
☐ Cecil-Conn—*Specialties*. . About $19.00
☐ Easy Pay Plan ($5 per month)
☐ Stoddard—*Case Studies in Obstetrics & Gynecology*. . About $10.00

Name. . . . . Address. . . . .

The Journal of the TENNESSEE MEDICAL ASSOCIATION

Published Monthly

By Tennessee Medical Association

OFFICE OF PUBLICATION, 112 LOUISE AVENUE, NASHVILLE 5, TENNESSEE

Second Class Postage Paid at Nashville, Tennessee

Volume 57
No. 4

APRIL, 1964

Per Year, $5.00
Single Copy, 50 Cents

Published Monthly

Contents

A Clinical Appraisal of Gastric Freezing for Duodenal Ulcer, H. William Scott, Jr., M.D., Harrison J. Shull, M.D., James A. O'Neill, Jr., M.D., Robert E. Richie, M.D., and Harold E. Snyder, M.D., Nashville, Tenn. 131

Suppurative Complications of Appendectomy, Duncan A. Killen, M.D., Nashville, Tenn. and Lt. Col. Lawrence M. Jackson, MC, USA, Fort Belvoir, Va. 136

Venomous Snakebites in Tennessee, Henry M. Parrish, M.D., Dr. P.H., and Louis P. Donovan, M.S., Columbia, Mo. 141

The Treatment of Hyperthyroidism, Robert B. Gilbertson, M.D., Knoxville, Tenn. 147

Clinicopathologic Conference 152

The New President 160

President's Letter 162

Editorial 163

Deaths 164

Programs and News of Medical Societies 164

National News 164

Medical News in Tennessee 166

Our Mail Box 168

Personal News 169

Announcements 170

Instructions to Contributors

Manuscripts submitted for consideration for publication in the Journal of the Tennessee Medical Association should be addressed to the Editor, Dr. R. H. Kampmeier, Vanderbilt University Hospital, Nashville 12, Tennessee.

Manuscripts must be typewritten on one side of letter-weight paper. Either double or triple spacing and wide margins must be provided to facilitate editing which will be legible for the printer.

Bibliographic references should not exceed ten or twelve in number documenting key publications. They should appear at the end of the paper. The bibliographic references must conform to the style used in the American Medical Association publications, as,—Alais, F. G.: What Is Known About It, J. Tennessee M. A., 35:132, 1950.

Illustrations must be mounted on white cardboard and be numbered. The editor will determine the number, if any, of illustrations to be used. Additional illustrations will be charged to the author. The author's name should appear on the back of each illustration.

If reprints are desired, the requested number should be indicated in the letter accompanying the manuscript. The author will be billed by the publisher.

DEVOTED TO THE INTERESTS OF THE MEDICAL PROFESSION OF TENNESSEE

R. H. KAMPMEIER, M.D., Editor

This Association Does Not Officially Indorse Opinions Presented in Different Papers Published herein

Copyright, 1964, by the Tennessee Medical Journal

disability without debilitation . . .



supportive oral anabolic therapy • potent • well-tolerated

Disabling illness or injury at any time of life can invite a slowdown in the natural anabolic processes or acceleration of catabolic processes, resulting in a "wasting" of protein and minerals needed for tissue repair. Loss of weight and appetite, strength and vitality, may be the evident signs of this process, frequently accompanied by a lowering of mood, interest and activity. The older the patient, the more pronounced may be the signs of debilitation. A potent, well-tolerated anabolic agent plus a diet high in protein can make a remarkable difference.

WINSTROL® brand of STANOZOLOL

. . . a new oral anabolic agent, combines high anabolic activity with outstanding tolerance. Although its androgenic influence is extremely low*, women and children should be observed for signs of slight virilization (hirsutism, acne or voice change), and young women may experience milder or shorter menstrual periods. These effects are reversible when dosage is decreased or therapy discontinued. Patients with impaired cardiac or renal function should be observed because of the possibility of sodium and water retention. Liver function tests may reveal an increase in BSP retention, particularly in elderly patients, in which case therapy should be discontinued. Although it has been used in patients with cancer of the prostate, its mild androgenic activity is considered by some investigators to be a contraindication.

Dosage in adults, *usually 1 tablet t.i.d.;* young women, *1 tablet b.i.d.;* children (school age), *up to 1 tablet t.i.d.;* children (pre-school age), ½ *tablet b.i.d. Shows best results when administered with a high protein diet. Available as scored tablets of 2 mg. in bottles of 100.*

*The therapeutic value of anabolic agents depends on the ratio of anabolic potency to androgenic effect. This anabolic-androgenic activity ratio of Winstrol is greater than that of all the oral anabolic agents currently in use.

Winthrop

Winthrop Laboratories, New York, N. Y.



The discharged mental patient . . . and Thorazine®

brand of chlorpromazine

"The average practitioner is quite capable of handling the vast majority of ex-institutionalized patients by regulation of medication, reassurance, manipulation of the environment where necessary, and . . . other technics." Kline, N.S.: Postgrad. Med. 27:620 (May) 1960.

The family physician must often assume responsibility for the discharged mental patient. Thorazine (chlorpromazine, SK&F) can be a valuable adjunct to the continuing care of this patient, because it helps prevent relapses by insulating him from the impact of stressful experiences. For successful rehabilitation and prevention of rehospitalization, however, the former mental patient—and often his family—also needs the guidance and counsel of his physician.

Many physicians are surprised by the high doses of Thorazine (chlorpromazine, SK&F) used in patients released to their care from mental hospitals. This surprise may be expressed by a drastic reduction in dosage "to play it safe"—with serious consequences for the patient.

The successful maintenance of former mental patients requires adequate, often "high" dosage, and often for prolonged periods of time. Fortunately, these dosages do not mean greater risks for the patient. On the contrary, there is much less risk of serious side effects once a patient has become gradually accustomed to Thorazine (chlorpromazine, SK&F)—*regardless of dosage*—over a period of a few months. Continuing therapy is almost always well tolerated, and is essential to most patients' continued well-being.

Brief Summary: Thorazine (chlorpromazine, SK&F) has been successfully used for 10 years in the treatment of mental and emotional disturbances, and has proven highly effective in the maintenance therapy of former hospitalized mental patients. *Principal side effects:* The most frequently encountered side effect is transitory drowsiness. Other occasional side effects include: dry mouth, nasal congestion, constipation, miosis, dermatological reactions, photosensitivity, jaundice, hypotension, increased appetite and weight; very rarely, mydriasis, agranulocytosis, extrapyramidal symptoms. *Contraindications:* Comatose states or in the presence of excessive amounts of C.N.S. depressants.

For complete prescribing information, please see *PDR* or available literature.

SK&F *Smith Kline & French Laboratories*



RAUMA!

relieves pain and relaxes muscle

Following traumatic injury, patient comfort can be increased and recovery time shortened by the simultaneous treatment of both pain and muscle spasm with 'Soma' Compound.

Soma® Compound

carisoprodol 200 mg., acetophenetidin 160 mg., caffeine 32 mg.

Also available with ¼ gr. codeine as SOMA® COMPOUND WITH CODEINE: carisoprodol 200 mg., acetophenetidin 160 mg., caffeine 32 mg., codeine phosphate 16 mg. (Warning: may be habit forming).

WALLACE LABORATORIES/*Cranbury, N.J.*

effects: Although there has been no evidence of tolerance, drawal symptoms or excessive self-medication, 'Soma' pound and 'Soma' Compound with Codeine, like other al nervous system depressants, should be used with cau- in addiction-prone individuals. While codeine addiction is vely rare and easily broken, the same precautions must be rved as for any other opium alkaloid. Nausea, vomiting, ipation and miosis are possible codeine side effects. Should toms of hypersensitivity occur, discontinue medication.

Contraindications: None reported.

Complete product information available in the product package, and to physicians upon request.

Dosage: Usual dosage is 1 or 2 tablets 4 times daily.

Supplied: 'Soma' Compound is available in orange, scored tablets; bottles of 50. 'Soma' Compound with Codeine (narcotic order form required) is available in white, lozenge-shaped tablets; bottles of 50.

CSO-1054



Baker's L

VOL. 1 NO. 1 FORECAST: HAPPY MOTHERS AND BABIES

NEW 'UNDERC SOLVES DIAPE

Trio of suspects identified...

Bacteria a Prime Culprit Organisms such as Bacillus ammoniagenes and Alcaligenes faecalis metabolize urine into chemical irritants. Proper laundering of diapers helps reduce number of organisms, but cannot completely eliminate bacterial growth.

Ammonia and Urea Implicated Ammonia produced by microorganisms is a major cause of skin irritation that leads to diaper rash.

The Moisture—Maceration—Infection Cycle Moisture from urine and feces, combined with diaper friction, results in damp, macerated skin—an ideal environment for bacterial proliferation. In the absence of energetic countermeasures, the moisture—maceration—infection cycle continues, leads to chronic diaper rash problems.



aby News



BAKER LABORATORIES, INC.

OVER' AGENT
R RASH CASE!

Diapersil successful!

Bactericidal to Ammonia-Splitting Pathogens Diapersil contains benzalkonium chloride, which is rapidly 'cidal' to organisms implicated in diaper rash. Benzalkonium chloride has a proven record of effectiveness and safety.

Continued 'Uripellent' Protection Silicones in Diapersil form a water-resistant coating which shields the skin from bacterial by-products and from maceration. Silicones have been found outstandingly effective in diaper rash, even when other types of therapy have failed.

Soothing to Inflamed Skin Panthenol, incorporated in a soothing and non-sensitizing base, relieves itching and pain, and gently promotes healing. Diapersil thus provides prompt symptomatic relief in diaper rash as well as in other pediatric skin conditions.

BAKER'S **DIAPERSIL**™ CREME

Formula: panthenol, dimethylpolysiloxane, benzalkonium chloride, in a watermiscible, non-sensitizing cream base

To treat and prevent diaper rash, excoriated buttocks, chafing, heat rash and similar conditions

BAKER LABORATORIES, INC. Subsidiary of U.S. Vitamin & Pharmaceutical Corp.

USANOL®

a new approach for an old problem

URINARY TRACT PATHOGENS URINARY TRACT PATHOGENS

USANOL Tablets are a urinary antiseptic and antispasmodic that destroy most urinary tract pathogens including strains resistant to antibiotics and sulfonamides.

COMPOSITION:
Each tablet contains:
Methenamine mandelate ..... 3.75 grs.
Homatropine methylbromide ..... 1/200 gr.

AVAILABILITY:
Available in bottles of 100 and 500 tablets.

DOSAGE:
Usual dose is one to two tablets 3 to 4 times a day but can be increased if needed.

CONTRAINDICATIONS:
Contraindicated in renal insufficiency, and caution in patients with glaucoma because of homatropine methylbromides.

ANOTHER ESTABLISHED NEED PRODUCT

FTP **First Texas** *Pharmaceuticals, Inc.* DALLAS • ATLANTA
SINCE 1901

why does 150 mg.



do more than 250 mg.



of other tetracyclines?

Because it has up to 3½ times the *in vitro* antibacterial activity[1]...combined with lower rate of decay in serum, slower renal clearance...a favorable depot effect, resulting from protein binding...all providing rapid, higher and sustained *in vivo* activity with as much as 2 days' extra activity.

DECLOMYCIN®

DEMETHYLCHLORTETRACYCLINE HCl

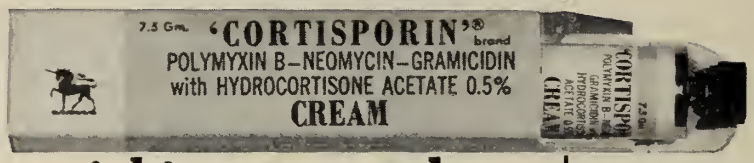
Effective in a wide range of everyday infections—respiratory, urinary tract and others—in the young and aged—the acutely or chronically ill—when the offending organisms are tetracycline-sensitive. **Side Effects** typical of tetracyclines which may occur: glossitis, stomatitis, proctitis, nausea, diarrhea, vaginitis, dermatitis, overgrowth of nonsusceptible organisms. Also: photodynamic reaction (making avoidance of direct sunlight advisable) and, very rarely, anaphylactoid reaction. Reduce dosage in impaired renal function. The possibility of tooth discoloration during development should be considered in administering any tetracycline in the last trimester of pregnancy, in the neonatal period, and in early childhood. *Capsules,* 150 mg. and 75 mg. of demethylchlortetracycline HCl. *Average Adult Daily Dosage:* 150 mg. q.i.d. or 300 mg. b.i.d. 1. Sweeney, W. M.; Dornbush, A. C., and Hardy, S. M.: Demethylchlortetracycline and Tetracycline Compared. Relative *in vitro* Activity and Comparative Serum Concentrations During 7 Days of Continuous Therapy. *Amer. J. Med. Sci.* 243:296 (Mar.) 1962.

LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, New York

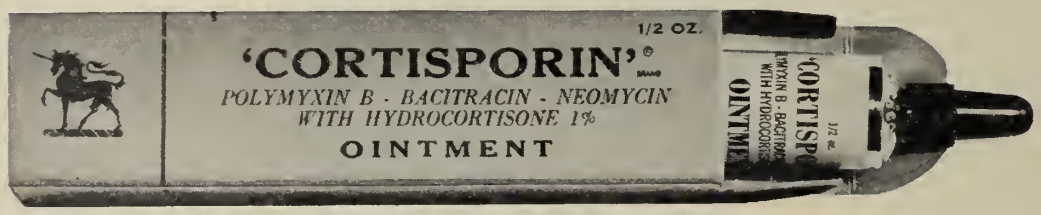
7516-3

Lederle

CHOOSE THE PRODUCT TO FIT THE NEED



a new vanishing cream base



a special low melting point base

anti-inflammatory
bactericidal
antipruritic
rarely sensitizing

CREAM—*Ingredients:* Each gram contains 'Aerosporin'® brand Polymyxin B* Sulfate 10,000 Units; Neomycin Sulfate (equivalent to 3.5 mg. Neomycin Base) 5.0 mg.; Gramicidin 0.25 mg.; Hydrocortisone Acetate 5.0 mg. (0.5%).

In a smooth, white, water-washable vanishing cream base with a pH of approximately 5.0. Inactive ingredients: liquid petrolatum, white petrolatum, propylene glycol, polyoxyethylene polyoxypropylene compound, emulsifying wax, distilled water, and 0.25% methylparaben as preservative.

Available: In tubes of 7.5 Grams.

OINTMENT—*Ingredients:* Each gram contains 'Aerosporin'® brand Polymyxin B* Sulfate 5,000 Units; Zinc Bacitracin 500 Units; Neomycin Sulfate 5 mg. (equivalent to 3.5 mg. Neomycin Base); Hydrocortisone 10 mg. (1%).

In a special white petrolatum base.

Available: In tubes of ½ oz. and ⅛ oz.

*U.S. Patent Nos. 2,565,057–2,695,261

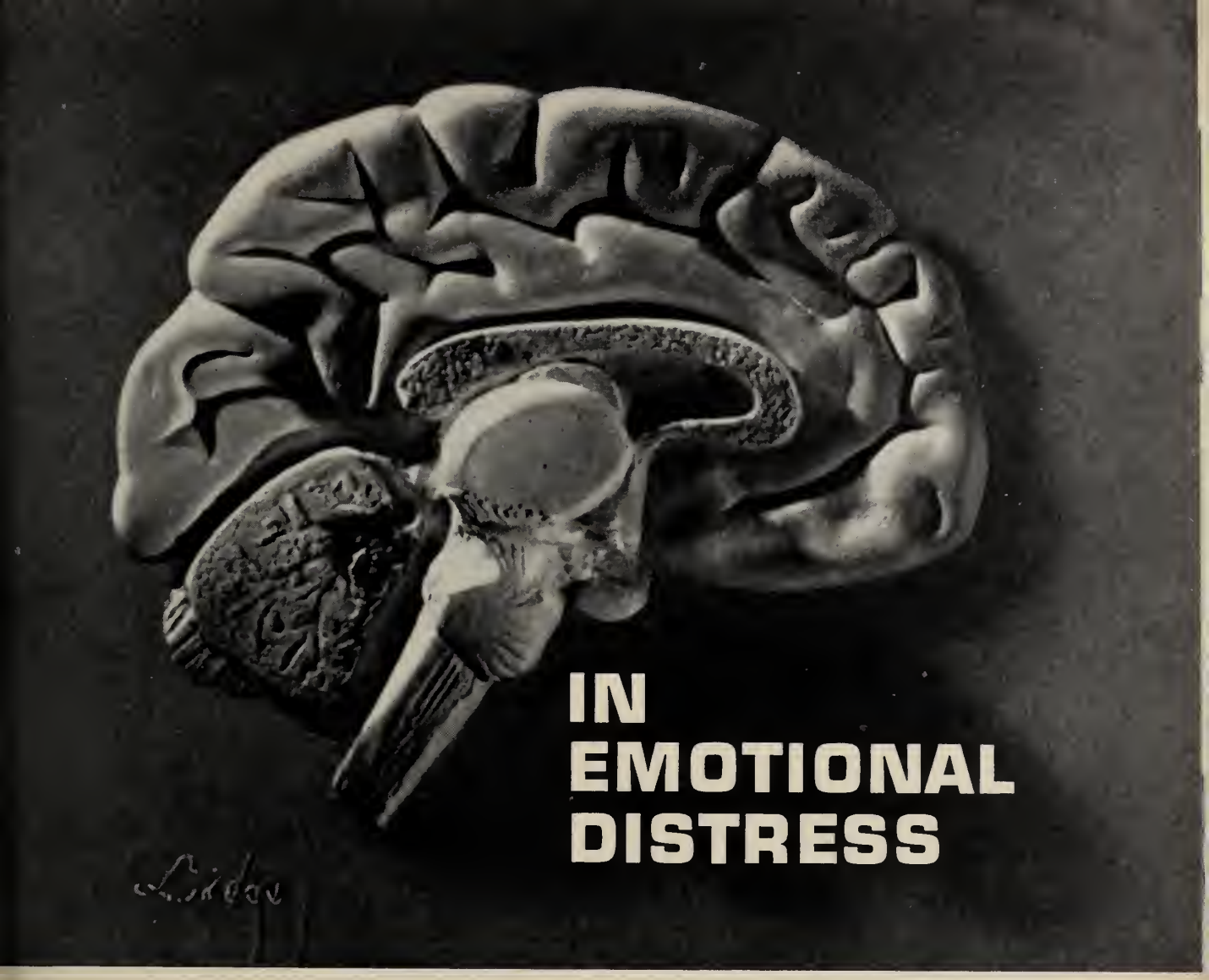
Indications: Wherever inflammation or infection occurs and is accessible for topical therapy.

Contraindications: These drugs are contraindicated in tuberculous, fungal or viral lesions (herpes simplex, vaccinia and varicella).

Caution: As with other antibacterial preparations, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs.

Complete literature available on request from Professional Services Dept. PML.

BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, N.Y.



RELIEVES ANXIETY, APPREHENSION AND TENSION...



All day long
. . . keeps the patient calm, and the mind clear.



All night too
. . . aids restful sleep, with no barbiturate hangover.

MEPROSPAN®-400

(MEPROBAMATE 400 MG. SUSTAINED RELEASE)

Simplified, convenient dosage for emotional relief.

Side effects: 'Meprospan' (meprobamate, sustained release) is remarkably free of untoward reactions. Daytime drowsiness has not been reported. Rare allergic or idiosyncratic reactions may occur, generally developing after 1-4 doses of the drug.

Contraindications: Previous allergic or idiosyncratic reactions to meprobamate contraindicate subsequent use.

Precautions: Should administration of meprobamate cause drowsiness or visual disturbances, the dose should be reduced. Operation of motor vehicles or machinery or other activity requiring alertness should be avoided if these symptoms are present. Effects of excessive alcohol may possibly be increased by meprobamate. Prescribe cautiously and in small quantities to patients with suicidal tendencies. Massive overdosage may produce lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction; withdraw gradually after prolonged use at high dosage.

Complete product information available in the product package, and to physicians upon request.

Usual adult dosage: One 400 mg. capsule or two 200 mg. capsules at breakfast; repeat with evening meal.

Supplied: 'Meprospan'-400 (meprobamate 400 mg.), 'Meprospan'-200 (meprobamate 200 mg.), each in sustained-release capsules. Both potencies in bottles of 30.

ME-1969

WALLACE LABORATORIES *Cranbury, N. J.*

reduce or obviate the need for transfusions and their attendant dangers

KOAGAMIN is indicated whenever capillary or venous bleeding presents a problem. KOAGAMIN has an outstanding safety record -- in 25 years of use no report of an untoward reaction has been received; however, it should be used with care on patients with a predisposition to thrombosis.



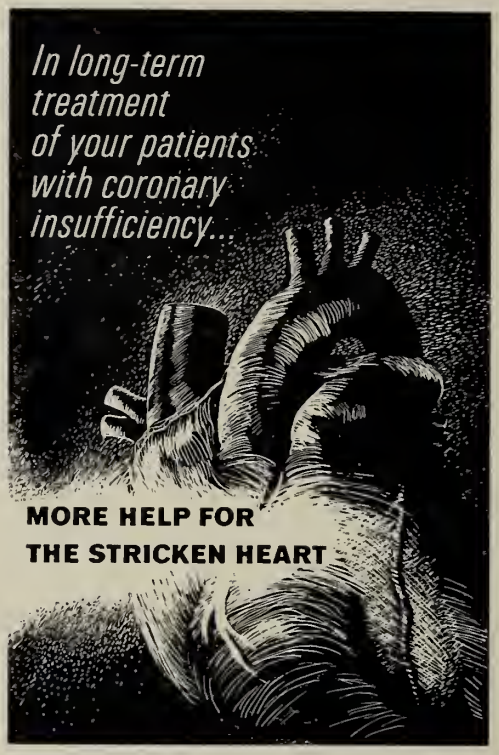
KOAGAMIN®

parenteral hemostat

Each cc contains: 5 mg. oxalic acid, 2.5 mg. malonic acid, phenol 0.25%; sodium carbonate as buffer.

Complete data with each 10cc vial. Therapy chart on request.

Chatham CHATHAM PHARMACEUTICALS, INC.
Newark 2, New Jersey
Distributed in Canada by Austin Laboratories, Ltd. • Paris, Ontario



- **PETN (pentaerythritol tetranitrate) to increase oxygen supply**
- **plus meprobamate to decrease anxiety and tension**

Unlike phenobarbital, meprobamate is *not* cumulative and does *not* cause depression.

Side effects: Pentaerythritol tetranitrate may infrequently cause nausea and mild headache, usually transient. Slight drowsiness may occur with meprobamate and, rarely, allergic reactions. **Precautions:** Meprobamate may increase effects of excessive alcohol. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction. **Contraindications:** Like all nitrate-containing drugs, 'Miltrate' should be given with caution in glaucoma. *Complete product information available in the product package, and to physicians upon request.* **Dosage:** 1 to 2 tablets, *before meals* and at bedtime. Individualization required. **Supplied:** Bottles of 50 tablets.

CML-1055

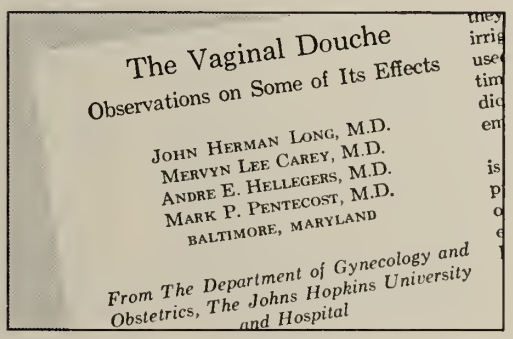
MILTRATE®

meprobamate 200 mg. + pentaerythritol tetranitrate 10 mg.

WALLACE LABORATORIES / *Cranbury, N. J.*

A Valuable Contribution To Medical Literature

A DEFINITIVE STUDY ON DOUCHING



The Vaginal Douche
Observations on Some of Its Effects

JOHN HERMAN LONG, M.D.
MERVYN LEE CAREY, M.D.
ANDRE E. HELLEGERS, M.D.
MARK P. PENTECOST, M.D.
BALTIMORE, MARYLAND

From The Department of Gynecology and Obstetrics, The Johns Hopkins University and Hospital

A SEARCH OF MEDICAL LITERATURE REVEALS NO COMPARABLE OBJECTIVE EVALUATION OF THE SUBJECT.

The authors state at the outset,

"Each physician has his own idea of the value or harm of the vaginal douche and many have expressed such ideas in writing. Such opinions have been arrived at without any intensive investigation or observation of subjects using douches as compared to those not using them. The purpose of this study is to report our observations on three groups of patients, one taking no douches, a second douching with a medicated solution* and a third douching with plain water."[1]

1. West. J. Surg., Obsts. & Gynec.: *71*:122-127, 1963

*The medicinal powder used in this study was META CINE®, a scientifically formulated preparation containing: papain, lactose, citric acid, methyl salicylate, eucalyptol, menthol and chlorothymol.

OBSERVATIONS BASED ON EXTENSIVE AND THOROUGH EXAMINATION SCHEDULE.

"One hundred patients were selected at random, regardless of their chief complaint, from the general population attending the Out-Patient Gynecology Clinic of The Johns Hopkins Hospital. Those selected were reexamined at 1, 3. 6, 9 and 12 months after the initial visit."

"At intervals patients were switched to the regimen of another group so that comparison of the effect of douching or not douching might be made in the same individual."

Three years were required to complete the study.

An evaluation of the objective findings of the study demonstrates that douching with META CINE® had the following effects on vaginal secretion:

- increased Doderlein organisms,
- proved effective in lowering WBC counts,
- proved effective in increasing glycogen content.

META CINE® was found to be a good antagonist to vaginal discharge and irritation—and also proved effective in reducing cervicitis.

No untoward effects of douching were encountered in the study.

Reprints of the complete study and professional samples of Meta Cine are available on request.

BRAYTEN PHARMACEUTICAL COMPANY • *Chattanooga 9, Tennessee*

The one tranquilizer that

BELONGS IN EVERY PRACTICE

it's versatile: The years have proved that 'Miltown' (meprobamate) is the one tranquilizer that is helpful in almost every aspect of daily practice. Virtually any of your patients, regardless of age, can be given the drug with confidence, either as a primary treatment or as an adjunct to other therapy.

Outstanding record of safety: Ten years of clinical use among millions of patients throughout the world—plus more than 1500 published reports covering the use of the drug in almost every field of medicine—support your prescriptions for 'Miltown' (meprobamate). This is why it *"belongs in every practice."*

dependable: 'Miltown' (meprobamate) is an established drug. There are no surprises in store for you or your patient. You can depend on it to help your patients through periods of emotional distress—and to help maintain their emotional stability.

easy to use: Because 'Miltown' (meprobamate) is compatible with almost any other kind of drug therapy, you'll find it fits in easily with any program of treatment you are now using. It will not, therefore, complicate treatment of patients seen in clinical practice.

Side effects: Slight drowsiness may occur and, rarely, allergic or idiosyncratic reactions, generally developing after 1 to 4 doses of the drug.

Contraindications: Previous allergic or idiosyncratic reactions to meprobamate contraindicate subsequent use.

Precautions: Should administration of meprobamate cause drowsiness or visual disturbances, the dose should be reduced. Operation of motor vehicles or machinery or other activity requiring alertness should be avoided if these symptoms are present. Effects of excessive alcohol may possibly be increased by meprobamate. Prescribe cautiously and in small quantities to patients with suicidal tendencies. Massive overdosage may produce lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction; withdraw gradually after prolonged use at high dosage. *Complete product information available in the product package, and to physicians upon request.*

Usual adult dosage: 1 or 2 400 mg. tablets t.i.d.

Supplied: 400 mg. scored tablets, 200 mg. coated tablets.

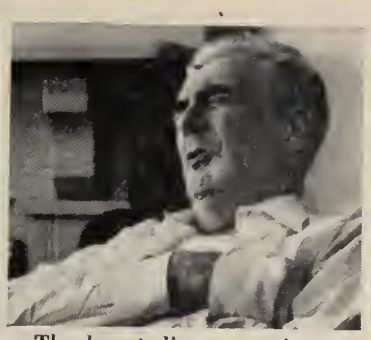
CM-1114



The insomniac



The tense, nervous patient



The heart-disease patient



The surgical patient



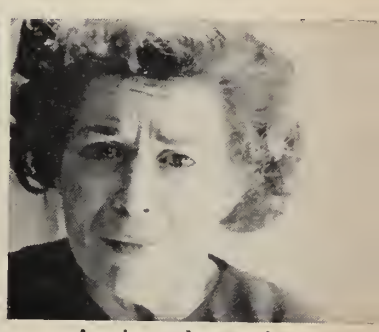
The girl with dermatosis



Tension headache



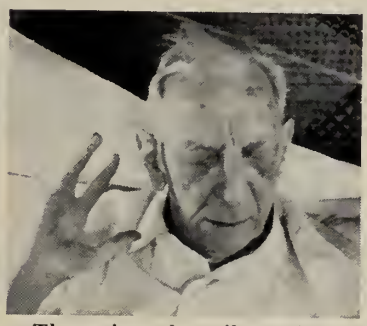
The woman in menopause



Anxious depression



Premenstrual tension



The agitated senile patient



The alcoholic



The problem child

the original brand of meprobamate

Miltown®



The G.I. patient

WALLACE LABORATORIES
Cranbury, N.J.



an easier way?

'METHEDRINE'® brand
METHAMPHETAMINE HYDROCHLORIDE

is an easier way to help control food craving & keep the reducer happy

With "hunger pains" abolished, the patient can shrug off the chains of psychogenic craving that bind him to his habit of overeating and cooperate cheerfully with the prescribed diet.

In obesity, "...our drug of choice has been methedrine (methamphetamine hydrochloride)...because it produces the same central effect with about one-half the dose required with plain amphetamine, because the effect is more prolonged, and because undesirable peripheral effects are significantly minimized or entirely absent." Douglas, H. S.: West. J. Surg. **59**:238 (May) 1951.

Description: Each scored tablet contains 5 mg. 'Methedrine' brand Methamphetamine Hydrochloride.

Dosage: 2.5 mg. (½ tablet) 3 times daily. May be increased gradually according to response; more than 10 mg. daily rarely is needed. The last dose of the day should not be taken later than 6 hours before bedtime.

Side effects: Insomnia may occur if taken later than 6 hours before retiring. The usual peripheral actions of sympathomimetic amines (vasoconstriction and acceleration of the heart) are minimal and little noticed on low or moderate dosage.

Contraindications and precautions: Should not be used in patients with myocardial degeneration, coronary disease, marked hypertension, hyperthyroidism, insomnia or a sensitivity to ephedrine-like drugs. Moderate hypertension in the obese is not necessarily a contraindication since it may be relieved as the overweight is reduced.

Supplied: Tablets 5 mg., scored, in bottles of 100 and 1000.

Complete literature available on request from Professional Services Dept. PML.

BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, N.Y.

in maintenance therapy...

Arthralgen®

a working analgesic for the active arthritic



ARTHRALGEN®
Each tablet contains:

Salicylamide	250 mg.
Acetaminophen	250 mg.
Ascorbic acid (Vitamin C)	25 mg.

Arthralgen, a better-tolerated analgesic formulation of time-tested ingredients, works faster to free the arthritic from his pain without salicylate side effects. Since its analgesic components require no chemical conversion to act in the body, Arthralgen's pain relieving benefits are immediately available to provide a smoother, more rapid obtundation of pain than can be achieved with many true salicylates.

Arthralgen is especially useful for the prompt relief of early morning stiffness and pain with less risk of gastric irritation. And since Arthralgen contains no sodium it is safe for long-term use in arthritics who have other conditions which necessitate sodium restriction.

ARTHRALGEN®-PR

Each tablet contains:

Salicylamide	250 mg.
Acetaminophen	250 mg.
Ascorbic acid (Vitamin C)	25 mg.
Prednisone	1 mg.

The basic Arthralgen formulation plus prednisone is indicated for patients who require steroids. Prednisone has three advantages over cortisone, hydrocortisone, and ACTH. They are: (1) lack of sodium retention, (2) absence of increased potassium excretion, and (3) the unlikelihood of steroid-induced hypertension.*

Robins

BRIEF SUMMARY

Arthralgen and Arthralgen-PR are indicated in the management of rheumatoid arthritis, acute gouty arthritis, rheumatoid spondylitis, osteoarthritis, bursitis, fibrositis, and neuritis. Arthralgen may be used for analgesia in colds, flu, and various myalgias.

DOSAGE: One or two tablets four times a day. After remission of symptoms, dosage should be reduced to the minimum maintenance level.

SIDE EFFECTS: Nausea, GI upset, or mild salicylism may rarely occur. Symptoms of hypercorticoidism dictate reduction of dosage of Arthralgen-PR.

PRECAUTION: Reduction in dosage of Arthralgen-PR given over a long period should be gradual, never abrupt.

CONTRAINDICATIONS: Hypersensitivity to any ingredient.

As with any drug containing prednisone, Arthralgen-PR is contraindicated, or should be administered only with care, to patients with peptic ulcer, tuberculosis, nephritis, diabetes mellitus, acute psychoses, Cushing's syndrome (or Cushing's disease), overwhelming spreading (systemic) infection, or predisposition to thrombophlebitis.

Arthralgen-PR is generally contraindicated in patients with uremia and viral infections, including poliomylitis, vaccinia, ocular herpes simplex, and fungus infections of the eye. It is also contraindicated in patients with chicken pox or susceptible persons exposed to it.

SUPPLY: Arthralgen (white, scored) and Arthralgen-PR (yellow, scored) tablets are available in bottles of 100 and 500.

*Cohen, et al: J.A.M.A., 165:225, 1957.

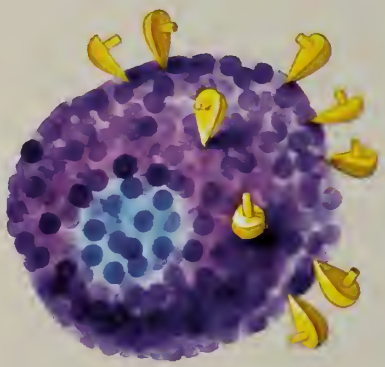
A. H. ROBINS CO., INC., RICHMOND, VIRGINIA

In theory, allergy works like this...

It is generally accepted that a complex antigen-antibody reaction underlies allergy. The reaction may be visualized in this simplified graphic form:



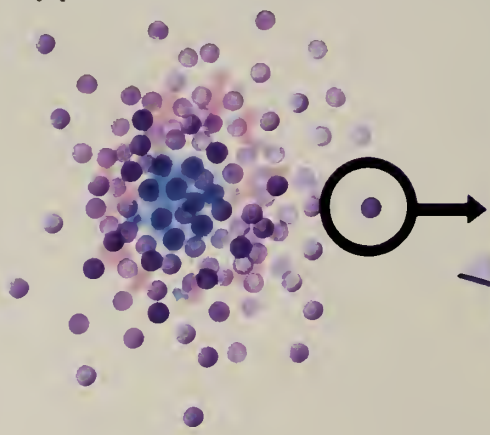
At first exposure to antigens (green) specific antibodies (yellow) are formed chiefly by plasma cells.



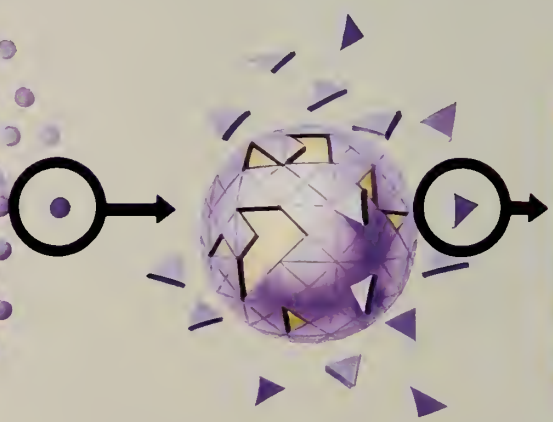
Circulating antibodies in the blood stream may become attached to mast cells in the tissues.



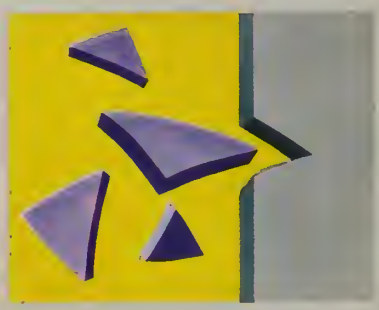
If the same *antigen* again enters the body and reacts with *antibodies* attached to cell walls, disturbances occur. The cell disrupts...



...depositing granules containing bound histamine or histamine-like substance in intercellular spaces.



Calcium ions and enzymes act on the granules breaking the binding and releasing histamine or histamine-like substance.



Theoretically, this liberated histamine (purple) acts at *receptor sites* in target tissues resulting in allergic manifestations.



Antihistamine (orange) is believed to compete with histamine at the receptor sites in target tissues — thus counteracting allergic effects.

In allergy, this antihistamine works with no more sedation than placebo*

The therapeutic response to Dimetane (brompheniramine maleate) is eloquent proof that a *potent* antihistamine does not have to be a sedative, too. You may expect unsurpassed relief of symptoms promptly in most types of allergy because Dimetane (brompheniramine maleate) *works* with a very low incidence of side effects. Indeed, as shown in a double-blind crossover study, with no greater incidence of sedation than placebo.*

*Schiller, I. W. and Lowell, F. C.: New England J. Med. *261*:478, 1959.

CONTINUOUS ACTION UP TO 10-12 HOURS

Dimetane® Extentabs®

(brompheniramine maleate, 8mg. & 12mg.)

BRIEF SUMMARY: Indications: Dimetane (brompheniramine maleate) is a potent antihistamine effective in a wide variety of allergic states.

Side Effects: Hypersensitivity reactions, including skin rashes, urticaria, hypotension, and thrombocytopenia, have been reported rarely. Occasional transitory drowsiness, lassitude, nausea, or giddiness may be encountered. Dryness of the mouth and mydriasis have been reported infrequently.

Precautions: Until response is determined, patient should be cautioned against engaging in mechanical operations requiring alertness.

Contraindications: Hypersensitivity to antihistamines. Not recommended for use during pregnancy.

ALSO AVAILABLE: New lower strength Dimetane *8 mg.* Extentabs (brompheniramine maleate 8 mg.); conventional tablets (4 mg.); Elixir (2 mg./5 cc.); Injectable (10 mg./cc. ampuls, and 100 mg./cc. in 2 cc. vials).

A. H. ROBINS CO., INC., RICHMOND 20, VIRGINIA



Doctor, you can take it with you!



THE BURDICK EK-III **DUAL-SPEED ELECTROCARDIOGRAPH**

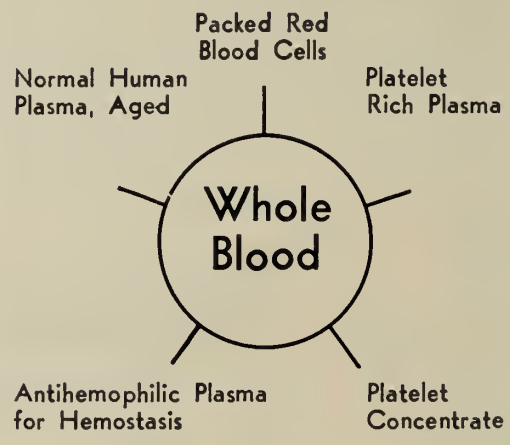
- 26½ pounds light, including all accessories and carrying case! Ideal for office or bedside use
- 25 or 50 mm. speed — an accurate record for an accurate diagnosis
- frequency response greatly in excess of minimum A.M.A. standards
- top-loading paper drive eliminates tedious paper-threading adjustments

Burdick

THE BURDICK CORPORATION
MILTON, WISCONSIN
Branch Offices: New York • Chicago • Atlanta • Los Angeles
Dealers in all principal cities
KAY SURGICAL, INC.
1144 Madison Ave. Memphis, Tenn.

Follow the trend to

BLOOD COMPONENT THERAPY



Best for the patient and More Economical.

All available from

BLOOD BANK FOUNDATION

1921 Broadway ALpine 4-3551
NASHVILLE, TENNESSEE



HOW TO BE SURE
your young patients get the aspirin dosage you want them to have

The answer is Orange Flavored Bayer Aspirin for Children

The dosage is 1¼ grains per tablet. Mothers place such confidence in the Bayer name. And the new orange flavor is so fresh and smooth that children take it readily. (The grip-tight cap on the bottle helps keep them from taking it on their own.)

For professional samples, just write The Bayer Company, Dept. 112 1450 Broadway, New York 18, New York



RECOGNIZE THIS PATIENT?



"I don't sleep well . . . I dream a lot . . . wake up tired and irritable. I don't have any appetite . . . I'll never be cured."

When you recognize signs of depression and anxiety and associate them with an organic condition—add 'Deprol' to your therapy.

Typical conditions in which 'Deprol' should be considered for control of the associated depression and anxiety:

cardiovascular disorders ■ arthritis ■ cancer ■ menopause ■ alcoholism ■ obesity ■ asthma, hay fever and related allergies ■ chronic infectious diseases ■ dermatoses ■ G.I. disorders, and many other organic disturbances.

When you recognize depression and anxiety traceable to an emotionally charged situation with no somatic disorder—start the patient on 'Deprol'.

Typical situations in which 'Deprol' is indicated:

fear of cancer or other life-threatening disease ■ pre- and post-operative fears ■ postpartum despondency ■ family problems ■ death of a loved one ■ loss of work ■ retirement problems ■ financial worries, and many other stressful situations.

Deprol®

meprobamate 400 mg. + benactyzine hydrochloride 1 mg.

BRIEF SUMMARY: *Indications:* Depression, especially when accompanied by anxiety, tension, agitation, rumination or insomnia. *Side Effects:* Slight drowsiness and, rarely, allergic reactions, due to meprobamate, and occasional dizziness or feeling of depersonalization in higher dosage, due to benactyzine, may occur. Meprobamate may increase effects of excessive alcohol. Use with care in patients with suicidal tendencies. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction. Withdraw gradually after prolonged use at high dosage. *Complete product information available in the product package, or to physicians upon request.*

USUAL ADULT DOSAGE: 1 tablet q.i.d. May be increased gradually, as needed, to 3 tablets q.i.d.; with establishment of relief, may be reduced gradually to maintenance levels.

SUPPLIED: Light-pink, scored tablets. Bottles of 50.

WALLACE LABORATORIES / *Cranbury, N. J.*

CO-817



Whether you're a teacher correcting exams. A student cramming for them. A housewife cleaning up after the kids. Or a businessman working late at night. Whoever you are, things go better when you pause and refresh with ice-cold Coca-Cola.

New Canaan
Connecticut

The Silver Hill Foundation for the care and treatment of the psychoneuroses, offers Senior and Junior physicians an opportunity to practice psychiatry in a pleasant community, forty miles from New York. Professional freedom and a challenging opportunity to assume clinical and administrative responsibility. Teaching opportunities. Accredited Three Year Residency.

Interesting compensation and supplemental benefits. Excellent schools; minutes to beaches or mountain lakes.

Address:

William B. Terhune, M.D.
Medical Director
The Silver Hill Foundation
Box 1177
New Canaan, Connecticut
Telephone
New Canaan 966-3561

Professional Liability Insurance
(MALPRACTICE)

Policy and Rates Approved
by the
TENNESSEE MEDICAL ASSOCIATION



Standard Coverage That SAVES YOU 35%

Class 1—Physicians doing no surgery

Class 2—Physicians doing minor surgery or assisting in major surgery on own patients

Class 3—Surgeons - General Practitioners who perform major surgery or assist in major surgery on other than their own patients and specialists: Anesthesiologists, Cardiologists (including catheterizations, but not including surgery), Ophthalmologists and Proctologists

Class 4—Surgeons - Specialists

Limits	Class 1	Class 2	Class 3	Class 4
5/15	$ 37.05	$ 46.15	$ 89.05	$133.25
10/30	50.02	62.30	120.22	179.89
25/75	63.36	78.92	152.28	227.86
50/150	70.02	87.22	168.30	251.84
75/225	74.10	92.30	178.10	266.50
100/300	76.32	95.07	183.44	274.50
200/300	79.66	99.22	191.46	286.49
300/300	81.88	101.99	196.80	294.48
200/500	88.77	108.61	202.13	298.49
500/500	93.59	114.61	213.71	315.81
500/1 million	114.70	135.99	236.37	339.81
1 million/1 million	120.25	142.91	249.73	359.79

1. Partnership liability, increase premium for each partner by 20%.
2. X-Ray Therapy and Shock Therapy quotations made on request.
3. Premises Liability (bodily injury, property damage and medical payments) Minimum premium $8.00.

FARRINGER & CO.
Phone 524-7335
Knoxville, Tennessee

FARRINGER & CO.
Phone 276-7331
Memphis, Tennessee

FAW & SHERROD
Phone 926-8164
Johnson City, Tennessee

INGLE-KNOX INSURANCE AGENCY
Phone 265-4541
Chattanooga, Tennessee

LIPSCOMB & PITTS CO.
Phone 272-2515
Memphis, Tennessee

Your policy backed by Assets over $42,000,000.00

Shelby Mutual Insurance Company
of Shelby, Ohio

*20% off on Hospital—Professional Liability

For Information on Hospital-Professional Liability and other coverages, please contact one of the agents listed.





Out-Patient Clinic and Offices

HILL CREST SANITARIUM

Established in 1925

FOR NERVOUS AND MENTAL DISEASES
AND ADDICTION PROBLEMS

James A. Becton, M.D. James K. Ward, M.D.

P. O. Box 2896, Woodlawn Station, Birmingham 6, Ala. Phones WOrth 1-1151



A SURGICAL INSTRUMENT OIL

Scientifically Developed for the

MEDICAL PROFESSION

Apply as indicated; a few drops especially in locks and serrations of instruments, or other delicate mechanisms. Leave a thin film over the entire instrument to prevent rust in disuse or storage. This highly refined clear instrument oil will not clog, gum or turn rancid. Non-corrosive.

4-oz. can 75c
Pt. bottle with dispensing can $2.50
Qt. bottle with dispensing can $4.00

Plus post.

White Surgical Supply Co.

SURGICAL SUPPLIES & ACCESSORIES

515 West Church Ave. Knoxville 7, Tennessee

Telephone 3-1186

ACCEPTED AMERICAN MEDICAL ASSN

HOMOGENIZED
VITAMIN D MILK
PRODUCES SOFT CURD

(400 U.S.P. Units Vitamin D Per Quart)

"A" Grade Sealtest MILK Phone AL 5-6451

Fortified Fat Free Milk
(2000 Units Vitamin A—400 Units Vitamin D)

NASHVILLE PURE MILK CO.

WANTED:

Staff physicians needed in Internal Medicine, General Medicine, and Psychiatry at VA Hospital, Tuskegee, Alabama, immediately. Salaries up to $19,785, depending on qualifications. Excellent fringe benefits. For information and applications, write J. W. Giles, M.D., Hospital Director.

SAINT ALBANS

PSYCHIATRIC HOSPITAL

(A Non-Profit Organization)

Radford, Virginia

Telephone: 639-2482

STAFF

James P. King, M.D., Director

William D. Keck, M.D.
Clinical Director
James K. Morrow, M.D.
Silas R. Beatty M.D.
Jack M. Rogers, M.D.

Edward W. Gamble, III, M.D.
Morgan E. Scott, M.D.
Jean M. Glasgow, M.D.
J. William Giesen, M.D.
Internist (Consultant)

Clinical Psychology:

Thomas C. Camp, Ph.D.
Artie L. Sturgeon, Ph.D.

Don Phillips
Administrator

AFFILIATED CLINICS

Bluefield Mental Health Center
525 Bland St., Bluefield, W. Va.
David M. Wayne, M.D.
Phone: 325-9159

Beckley Mental Health Center
109 E. Main Street, Beckley, W. Va.
W. E. Wilkinson, M.D.
Malcolm G. MacAulay, M.D.
Phone: 253-8397

Charleston Mental Health Center
1119 Virginia St., E., Charleston, W. Va.
Richard D. Kitching, M.D.
Phone: 344-3578

Norton Mental Health Clinic
Norton Community Hospital, Norton, Va.
Pierce D. Nelson, M.D.
Phone: 1090

THE ARTHRITICS WHO COULD NOT TAKE STEROIDS

The bane of the steroids, new and old, has been th certain undesirable metabolic effects — including s and water retention, edema, overstimulation of t appetite, excessive weight gain, mood swings seemed to be firmly linked to the primary an inflammatory action. For arthritics already overweig or with cardiovascular disease complicated by edem or those who were tense and anxious, steroid tre ment could aggravate their problems. But with t advent of ARISTOCORT® Triamcinolone, many these arthritics became "steroid-treatable." The re son: Not only did *this* steroid provide gratifying rel of inflammation and pain, but it did so *without* t penalty of overstimulation of the appetite, excess weight gain, salt and water retention, edema, a undesirable euphoria. Six years of widespread use h confirmed these benefits for other arthritics as well those formerly untreatable.



ide Effects: Since it may, under some circumstances, roduce many of the unwanted effects common to all ortisone-like drugs, discrimination should always be xercised in administering ARISTOCORT® Triamcino- ne. Any of the Cushingoid effects are possible, as are urpura, G.I. ulceration, increased intracranial pres- ure and subcapsular cataract. Corticosteroids gen- rally may mask outward signs of bacterial or viral nfections. Catabolic effects to watch for include nuscle weakness and osteoporosis. Weight loss may ccur early in treatment but is usually self-limiting. *ontraindications:* While the only absolute contra- ndications are tuberculosis, herpes simplex and hicken pox, there are some relative contraindications peptic ulcer, acute glomerulonephritis, myasthenia gravis, osteoporosis, fresh intestinal anastomoses, diverticulitis, thrombophlebitis, psychic disturbance, pregnancy, infection) to weigh against expected benefits.

Why not consider ARISTOCORT® Triamcinolone when you are contemplating steroid therapy? Both you and your patient will be gratified with the results.

MAXIMUM STEROID BENEFIT – MINIMUM STEROID PENALTY

Aristocort®

Triamcinolone

1 mg., 2 mg., 4 mg. or 16 mg. tablets

EDERLE LABORATORIES • A Division of AMERICAN CYANAMID COMPANY, Pearl River, New York

Lederle

270-4



"Leakers" are ampoules with minute imperfections in the seal. You can't readily see the flaw, and often it's so small that liquids won't even drip through; but microscopic contaminants can slip in to render the contents nonsterile and potentially dangerous. ▪ Detecting "leakers" is the job of the vat and the blue dye. ▪ Sealed Lilly ampoules are placed in baskets, submerged in a vat containing methylene blue, and subjected to a vacuum. If there is an imperfect ampoule in the lot, the liquid is forced out. When the vacuum is released, the blue dye rushes in. ▪ With dye as the spy, elusive "leakers" are quickly spotted and rejected . . . another of the many controls that add immeasurably to the quality of the finished product.

Eli Lilly and Company • Indianapolis 6, Indiana, U.S.A.

Lilly

400372

Journal of the Tennessee Medical Association
OWNED AND PUBLISHED BY THE ASSOCIATION
Volume 57 APRIL, 1964 No. 4

A Clinical Appraisal of Gastric Freezing For Duodenal Ulcer†

H. WILLIAM SCOTT, JR., M.D., HARRISON J. SHULL, M.D., JAMES A. O'NEILL, JR., M.D., ROBERT E. RICHIE, M.D. and HAROLD E. SNYDER, M.D., Nashville, Tenn.

The authors describe their experience with gastric freezing for the treatment of duodenal ulcer. They emphasize the need for much more research with this modality before its place in treatment becomes certain.

Following the reports of Wangensteen and his associates[1-4] advocating gastric freezing as an effective treatment for duodenal ulcer, we initiated a program to appraise the safety and effectiveness of this procedure, first in the experimental laboratory and subsequently in patients. The Minnesota studies in laboratory animals and in patients have suggested that the use of their method of inducing profound gastric hypothermia can safely result in reduction of gastric acidity, relief of ulcer symptoms and roentgenographic disappearance of craters in a majority of subjects so treated. This report will summarize our experience to date in an objective clinical assessment of the value and limitations of gastric freezing procedure.

Method of Gastric Freezing Used in these Studies

We have used the same basic technic for inducing profound gastric hypothermia (gastric freezing) in both experimental and clinical studies that has been used by the Minnesota group. The hypothermia apparatus which we have used is a model* of the gastric hypothermia machine originally developed by Wangensteen and Smith,[5] and has proven to be an efficient and readily controllable piece of equipment. The machine consists basically of a refrigerating unit with a pump and appropriate controls whereby fresh 95% alcohol can be circulated through the refrigerator and pumped via a coaxial tube to and from the balloon attached to the extremity of the tube. In the induction of gastric hypothermia the uninflated balloon, securely attached to the coaxial tube, is passed through the subject's pharynx anesthetized locally into the stomach. The amount of alcohol in the balloon can then be adjusted to the desired volume to distend and fill the stomach comfortably (usually 800 to 1,000 ml.) by means of the pump's filling control system, and this volume can be constantly maintained by the pump during circulation between the refrigerating unit and the balloon. The machine will cool the circulating alcohol to the desired low level of temperature within 5 to 10 minutes, and will maintain this temperature with only slight variation by means of thermostatic controls. This unit has had a consistent flow rate of 1,460 ml. per minute. When in operation, in cooling the stomachs of experimental or clinical subjects, the temperature gradient between the coolant returning from the balloon (outflow) and that going to the balloon (inflow) has usually been about 2° C. The commercially available stomach shaped gastric balloons (Shampaine-O.E.M.) were used in these studies. The inflow tubing used with these balloons had an occluded tip and mul-

†From the Departments of Surgery and Medicine, Vanderbilt University School of Medicine, Nashville, Tenn.

This investigation was supported in part by Public Health Service Research Grant A.M. 06972, from the National Institute of Arthritis and Metabolic Diseases, and by the Clinical Research Center, Vanderbilt University School of Medicine, Grant No. FR-95, United States Public Health Service.

*Shampaine—O.E.M.

tiple lateral openings designed to avoid jet effect.

Clinical Studies

During the last year we have conducted a study of the clinical, radiologic and gastric secretory responses of patients with duodenal ulcer to gastric freezing in much the same manner as by Wangensteen and his associates. The plan of study for each patient included preliminary hospitalization with a careful survey of the state of his health to assure the existence of an active duodenal ulcer and the absence of coexisting illness. A gastrointestinal x-ray series was done in each instance. In addition to these observations, measurements of 12 hour nocturnal gastric secretion and gastric secretory responses to insulin induced hypoglycemia and histamine[2] were made before freezing, and repeated after freezing at intervals of 36 to 48 hours, 6 weeks, 3 months and 6 months. A gastrointestinal series was repeated at each of the latter intervals. All patients were admitted to the hospital for these follow-up evaluations which included, of course, careful assessment of the clinical response.

Every patient studied was carefully screened to be certain that he had a clinically active, chronic duodenal ulcer, which responded poorly to medical management as indicated by existing and past symptoms, coupled with current confirmatory radiologic findings. In addition, in every instance the patients were referred with the request that gastric freezing be considered in their ulcer treatment. Dr. Wangensteen and his associates directed many of these individuals to us. Before admission to the study each individual was apprised of the fact that the effectiveness of gastric freezing was still under investigation and that repeated clinical, radiologic, and gastric secretory studies would be required in his evaluation. Patients with evidence of pyloric obstruction, recent bleeding (3 months), gastric ulcer and/or serious systemic disorders which might be adversely affected by the freezing procedure were excluded from the study.

Sixty patients were selected for study from a group of approximately 120 candidates. Their ages ranged from 18 to 69 years; there were 57 men and 3 women. Each patient had a rather typical sequence of ulcer pain which was refractory to medical management to a varying degree. In 29 patients the past history included one or more episodes of bleeding and 6 had a history of perforation of a duodenal ulcer. The duration of symptoms ranged from 1 to 40 years and the majority had ulcer symptoms for 14 years or more. Conventional programs of medical treatment had been followed by all patients with varying degrees of fidelity. Simple surgical closure of a perforation, necessary in 6 individuals, was the only operative procedure for ulcer which had been done in any patient prior to the study.

Roentgenographic evaluation of these patients by the Department of Radiology at Vanderbilt University Hospital prior to the freezing procedure demonstrated a crater of an active duodenal ulcer in 31 individuals. Duodenal deformity consistent with ulcer disease was present in the remainder. In addition, one patient had giant hypertrophic gastric rugal folds and 4 others had an esophageal hiatal hernia.

Baseline measurements of gastric secretion were carried out in each individual prior to freezing using standardized methods. Large caliber (No. 20 to 24) plastic nasogastric tubes were used and positioned carefully in the most dependent portion of the stomach for collections of acid; during these collections the patients were kept in the supine position, either lying flat in bed or turned on the left side. A 12 hour nocturnal collection without stimulation, a test with maximal stimulation by histamine as outlined by Kay, and a Hollander test following insulin stimulation were performed. Measurements of volume, pH, and both free and total hydrochloric acid were made in each secretory study and acid values were expressed in milliequivalents. Sixty percent of the patients in this study were hypersecretors ($>$ 40 mEq.3, 20% fell into the usual duodenal ulcer range (20 to 40 mEq.) and 20% had normal acid values in their 12 hour collections ($<$ 20 mEq.).

Similar secretory studies were made in each individual in the immediate 36 to 48 hours after freezing and, in so far as possible, at 6 weeks, 3 months and 6 months intervals thereafter. The insulin test was

discontinued after its use in the first 25 patients.

Observations in Patients During Gastric Freezing

The method of gastric freezing used in the patients of this study was standardized as follows: All procedures were carried out in fasting subjects and each patient was premedicated with chlorpromazine, atropine and meperidine in moderate dosages. Each individual was placed in a relaxed sitting position with heating blankets around him. Electrocardiograms and rectal temperatures were monitored continuously. An intravenous infusion of 5% dextrose in water was started and the subject's pharynx was anesthetized with 0.5% tetracaine. After careful preliminary checks on the safety of the balloon, its attachment and the running of the machine, the end of the coaxial tube with its attached deflated balloon was passed by mouth and guided into the stomach. After filling the balloon to a volume of 400 ml. gentle traction was placed on the tubing to snugly fix the fundus of the partially filled balloon against the patient's cardia. Filling of the balloon in 100 ml. increments was then begun slowly to attain a volume ranging from 800 to 1100 ml. This was judged by the size of the patient and his comfortable tolerance of the balloon's volume.

After positioning and filling the balloon, the period of gastric cooling was started by perfusing the intragastric balloon with cold alcohol at the temperature selected. In the first 13 patients (Group 1) of this study the temperature of the alcohol returning from the balloon (outflow) was maintained at —12 to —14°C. for a period of 60 to 70 minutes. In the next 20 patients (Group II) an outflow temperature of —10°C. was maintained for 60 minutes, and in the last 27 patients (Group III) outflow temperatures of —11 to —12°C. were maintained for 60 minutes.

In the majority of instances the patients were comfortable during the procedure with few complaints and little or no change in blood pressure, pulse or electrocardiogram. Rectal temperatures seldom dropped more than 1°F. during the hour's cooling, although in one small woman the body temperature dropped to 94°F. despite the use of the heating blanket. In 16 individuals transitory flattening of the T waves occurred during the first 15 minutes of cooling. In 12 patients in the first few minutes of cooling a syncopal reaction occurred with pallor, sweating and feeling of faintness accompanied by fall in blood pressure and bradycardia. These disturbances lasted only four to five minutes as a rule. Frequently they were preceded or accompanied by epigastric cramping of brief duration. As the outflow temperature dropped to the selected cold level these phenomena subsided and usually did not occur again during the remainder of the cooling period.

Upon completing the period of cooling the pump and refrigerating unit were turned off; the balloon's volume was left undisturbed for a minimal period of 10 minutes after which the balloon was slowly deflated and withdrawn from the stomach. Small amounts of fresh blood were noted on the surface of the balloon in 11 instances.

Immediate Results of Gastric Freezing in Patients of this Study

After the freezing procedure there was uniformly immediate relief of the symptoms of duodenal ulcer in all but 2 patients. Most of the patients were comfortable, sustained no detectable ill effects from the procedure and remained asymptomatic in the immediate post-freeze period.

A striking feature was the patient's enthusiasm for this method of treatment. Liquids were allowed within a few hours after the freeze and a bland diet was permitted the following day. Patients were discharged after the completion of the immediate post-freeze studies. The average hospital stay was 4 days. Each patient was advised to stay on a bland diet, avoiding caffeine and alcohol, and to use anti-acids as needed. They were allowed to return to full and unrestricted activity.

There were a few exceptions, however, who developed problems which appeared to be directly related to the freezing procedure. The most frequently observed complication in the immediate period following freezing was bleeding from the gastrointestinal tract. This was usually manifested by melena of mild degree which did not require transfusion. Three patients with

melena, however, did require blood replacement. Most of the complications occurred in the patients in Group I where the degree of gastric cooling was more profound (—12 to —14 C.) and the duration of cooling extended to 70 minutes in most cases. Except for gastric ulcer all complications were quite transitory. Among the patients of this group who developed gastric ulcer was one man who had a major gastric hemorrhage a few weeks after freezing; a large gastric ulcer demonstrated radiologically was thought to be responsible for the bleeding. Operation was advised but he refused and, unfortunately, he died several months later with complications of the ulcer.

Gastric secretory studies in the immediate (36 to 48 hours) period after freezing revealed no significant suppression of the acid output in 65% of patients. However, using the data of the 12 hour overnight collections as a gauge, 35% of patients had at least a 50% suppression of free hydrochloric acid in the immediate post-freeze period.

Subsequent Results

Each of the 60 patients has been assessed at 6 weeks, 5 at 3 months, 31 at 6 months, and 3 at one year after freezing. For purposes of comparative evaluation the 60 patients have been divided into the three groups previously mentioned.

Group I (outflow temperature —12 to —14 C.). The immediate relief obtained by each of the 13 patients in the group was maintained for 6 weeks by 69% and for 3 months by 61% of the patients. Healing of duodenal ulcer craters as shown by x-ray occurred in 5 of the 13 patients; however, in 3 individuals there was progression of the duodenal deformity, and in 5 patients a gastric ulcer developed. By 6 months 8 patients (65%) had recurrence of ulcer symptoms and surgical treatment has been used in 6 of them. Significant suppression of gastric acid was maintained for 6 weeks by 30% and for 6 months by 23% of this group.

Group II (outflow temperature —10°C.). Seventy percent of the 20 patients in this group had relief of ulcer symptoms for 6 weeks, 65% for 3 months and 50% for 6 months. Roentgenographic improvement with healing of ulcer craters occurred in 8 patients. In one of these a small asymptomatic gastric ulcer developed after freezing. Only 15% of patients in this group had significant suppression of acid by our measurements at any point in the follow-up period. Three members of the group have been submitted to surgical treatment because of recurrent symptoms after freezing.

Group III (outflow temperature —11 to —12 C.). Symptomatic relief has been maintained for 6 weeks by 73% of the 27 patients in this group, and for 3 months by 46% of the patients followed for this length of time. Two of 4 patients followed for 6 months are relieved of their ulcer symptoms. Two patients have had a return of symptoms severe enough to warrant subsequent operative intervention. Sixteen of the 27 individuals in this group had ulcer craters demonstrated in their prefreeze evaluation and 7 of these have shown x-ray evidence of healing. Two gastric ulcers have developed in this group but there have been no other complications. Thirty-seven percent of patients studied 6 weeks after freezing and 30% of those studied at 3 months have had a significant reduction of gastric acid output.

Comment

In this appraisal of gastric freezing the single most consistent finding has been the immediate symptomatic relief which has been experienced by virtually every patient subjected to the procedure. (Table 1.) At

Table 1

Gastric Freezing for Duodenal Ulcer Results in 60 Patients

Period After Freezing	*Number Patients*	*Symptoms Relieved*	*Acid Reduced*
Immediate	60	97%	35%
6 Weeks	60	70%	35%
3 Months	50	57%	17%
6 Months	31	46%	16%

6 months following the freeze 46% of the patients have had continuing relief of ulcer symptoms. Twenty of 31 patients (65%) who initially had duodenal ulcer craters on x-ray examination showed evidence of healing after the freeze (Fig. 1). Wangensteen's studies suggest that suppression of gastric secretory activity by the freezing procedure is responsible for these beneficial results.[3,4] However, only one-third of our patients showed significant suppression of gastric acidity, and we have been unable to find

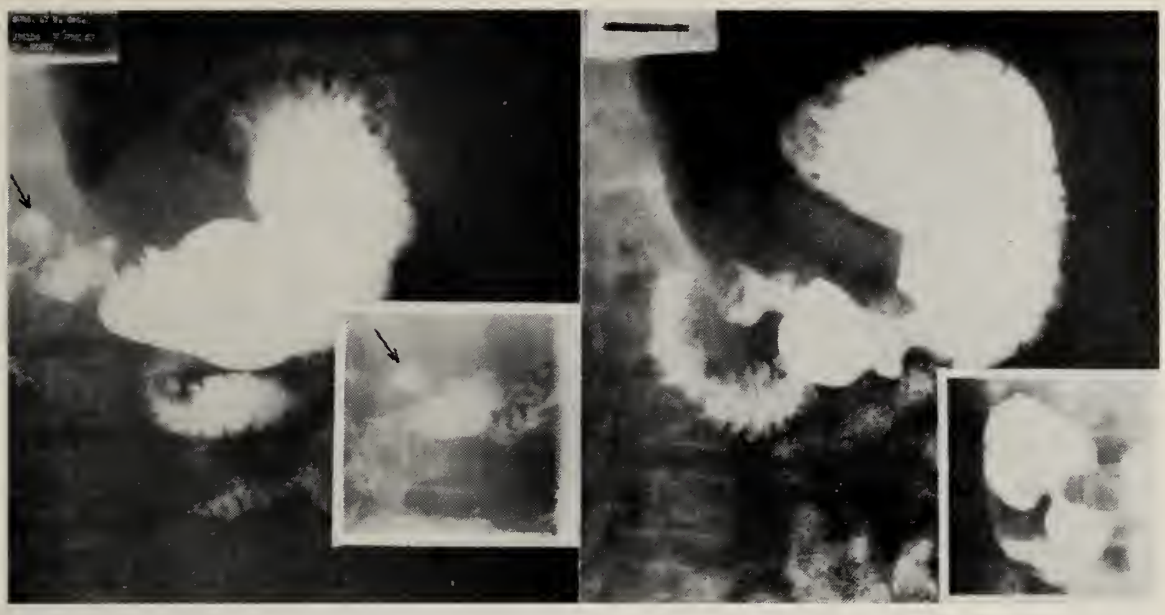


FIG. 1. A. Before Freeze. Note the large duodenal ulcer crater (arrow). B. Four months after freezing, the duodenal ulcer has healed.

any correlation between suppression of gastric secretion and either the patient's subjective improvement or the radiographic changes in ulcer activity (Table 1).

The complications of gastric freezing which have occurred in this series of patients demonstrated that the procedure can be hazardous. The majority of the complications occurred early in the study in patients who were submitted to freezing for a longer period and at a lower temperature than currently practiced.

It is our firm conviction that gastric freezing will not replace definitive surgical operation in treatment of chronic duodenal ulcer. However, the immediate symptomatic relief afforded by this procedure in 97% of the patients of this study suggests that further evaluation of this therapeutic modality is warranted.

The radiographic evidence of healing in 65% of duodenal ulcer craters in this series adds further support to this conclusion. The precise role of gastric freezing in the management of duodenal ulcer is yet to be determined. It may prove to be an adjuvant to traditional medical therapy. Experience has convinced us that its use should be restricted to centers where its potential benefits and hazards can be thoroughly evaluated under well controlled experimental conditions.

References

1. Bernstein, E. F., Sosin, H., Madsen, A. J., Walder, A. I., and Wangensteen, O. H.: Technique of Gastric Freezing in the Treatment of Duodenal Ulcer, J.A.M.A. 181:760, 1962.

2. Peter, E. T., Bernstein, E. F., Walder, A. I., Madsen, A. J., Sosin, H., and Wangensteen, O. H.: Effect of Profound Hypothermia (Gastric Freezing) Upon Various Phases of Gastric Secretion, Surg. Forum 13:269, 1962.

3. Wangensteen, O. H., Peter, E. T., Bernstein, E. F., Walder, A. I., Sosin, H., and Madsen, A. J.: Can Physiological Gastrectomy Be Achieved by Gastric Freezing? Ann. Surg. 156:579, 1962.

4. Wangensteen, O. H., Peter, E. T., Nicoloff, I. I., Walder, A. I., Sosin, H., and Bernstein, E. F.: Achieving "Physiological Gastrectomy" by Gastric Freezing, J.A.M.A. 180:439, 1962.

5. Wangensteen, S. L. and Smith, W. H.: A Gastric Hypothermia Machine, Surgery 47:924, 1960.

6. Kay, A. W.: Effect of Large Doses of Histamine on Gastric Secretion of Hcl; an Augmented Histamine Test, Brit. M. J. 2:77, 1953.

At times doctors tend to forget the complications of acute appendicitis which occurred so often in the past. This review focuses attention on the serious complications which may develop.

Suppurative Complications of Appendectomy*

DUNCAN A. KILLEN, M.D., Nashville, Tenn. and LT. COL. LAWRENCE M. JACKSON, MC, USA, Fort Belvoir, Va.

Although the operative treatment of acute appendicitis is usually curative, a septic complication occasionally results in a prolonged convalescence and rarely in fatal outcome. The present study was undertaken in an attempt to further clarify the current significance of certain variables as regards the incidence of suppurative complications following therapeutic appendectomy.

Materials and Methods

Emergency laparotomy was done on 458 patients with the preoperative diagnosis of acute appendicitis at DeWitt Army Hospital during the 26 month period ending March 1, 1963. Patients who had an interval appendectomy, following nonoperative treatment of appendiceal abscess, or elective appendectomy were not included in this series. In 13 instances the hospital chart was not available for review. Tabulation was made of the pathologic findings, operative management, adjunctive therapy, suppurative complications and the postoperative course in each of the remaining 445 patients.

The stage of the appendicitis was categorized according to the operative and pathologic findings as follows: (1) *no appendicitis* (no histologic evidence of acute appendicitis); (2) *simple appendicitis* (nongangrenous, nonperforative acute appendicitis); (3) *gangrenous appendicitis* (gangrenous, nonperforative acute appendicitis); (4) *perforative appendicitis* (perforative acute appendicitis in the absence of abscess formation); and (5) *appendiceal abscess* (perforative acute appendicitis with abscess formation). The standardized technic of appendectomy, using a right lower quadrant gridiron muscle-splitting incision in most instances, were utilized.

Suppurative complication was by definition limited to instances in which a collection of purulent material was demonstrated in the peritoneal cavity or the abdominal wall during the postoperative period. Nonsuppurative inflammatory reactions of the wound and skin-stitch abscesses were excluded. Prolonged purulent drainage about a wound (or peritoneal) drain was not considered to be a suppurative complication if no collection of pus developed, except in situations where the continued purulent drainage prevented performance of an anticipated delayed operative closure of a wound originally left open. Each suppurative complication could be categorized as a subcutaneous abscess, a subfascial abscess, or an intraperitoneal abscess as determined by clinical assessment of the location of the suppurative process.

An attempt was made to assess the effect of the stage of acute appendicitis, the bacterial contamination at the time of appendectomy, the use of wound drainage, the use of peritoneal drainage and the use of postoperative antibiotics on the incidence of postoperative suppurative complications. Only patients placed on an antibiotic regimen on the day of appendectomy were considered to have received a postoperative course of antibiotics. Patients begun on antibiotics later in the postoperative period, regardless of the reasons for the instruction of antibiotics, were grouped with patients not receiving a postoperative course of antibiotics.

Results

There were 300 males and 145 females. The age of the patients ranged from 20 months to 67 years, but 408 (92%) of the patients were younger than 40 years of age.

---

*From the Surgical Service, DeWitt Army Hospital, Fort Belvoir, Virginia.

Dr. Killen is presently on the staff of the Veterans Administration Hospital, Nashville, Tenn.

Appendectomy was done at the time of laparotomy in 442 patients, and acute appendicitis was found in 370 (83%) of the 445 patients. The ultimate diagnoses made in the 75 patients, who did not have acute appendicitis on histologic examination of the appendix, were as recorded in table 1.

Table 1

Diagnosis in 75 Patients Who Did Not Have Acute Appendicitis

Diagnosis	*Number of Patients*
Mesenteric adenitis	26
Ovarian cyst or follicle	10
Appendiceal infestation*	4
Ureteral stone	2
Small bowel obstruction	2
Acute ileitis	2
Meckel's diverticulitis	2
Perforated peptic ulcer	1
Colonic diverticulitis	1
Acute salpingitis	1
Perforation of cecum†	1
Pyelonephritis	1
Indeterminate	22
TOTAL	75

*Enterobius vermicularis
†By ingested foreign body

The pathologic status of the appendix at operation and the incidence of postoperative suppurative complications were as recorded in table 2. It is evident that the more advanced the stage of acute appendicitis, the greater the incidence of suppurative complications.

Bacterial cultures of the operative field were obtained in 137 patients at the time of appendectomy. The organism isolated was *Escherichia coli* in 63% of the positive cultures, *Pseudomonas aeruginosa* in 18% of the positive cultures, and an intermediate coliform bacillus in 8% of the positive cultures. Other organisms isolated were *Aerobacter aerogenes, Proteus vulgaris, Staphylococcus aureus, Streptococcus pyogenes* and Diphtheroids. Cultures of the peritoneal fluid and/or abscess contents were obtained at the time of appendectomy in 18 of the 32 patients who subsequently developed suppurative complications. These cultures grew *Esch. coli* (11 patients), *Ps. aeruginosa* (3 patients), Diphtheroids (2 patients), and *A. aerogenes* (1 patient); the culture was sterile in one instance. Cultures of material taken from the postoperative abscesses grew a gram-negative bacillus (*Esch. coli, Ps. aeruginosa, A. aerogenes* or an intermediate coliform bacillus) with two exceptions; in one instance the culture grew *Staph. aureus* and in the other instance the abscess was sterile by culture. The same organism was isolated at the time of appendectomy and at the time of drainage of the postoperative abscess in 64% of the determinate cases. In summary, the type of bacteria cultured from the wound at the time of appendectomy could not be correlated with the incidence of postoperative suppurative complications; however, the bacteria isolated from the postoperative abscess were the same as that originally isolated at the time of appendectomy in the majority of instances.

Twenty-four of the 34 postoperative wound abscesses observed were limited to the subcutaneous space. The incidence of such abscesses, according to the pathologic status of the appendix and the technic of wound closure, can be seen in table 3. The tendency to use subcutaneous drainage and delayed skin closure in the patients with the more complicated and more advanced pathologic processes makes assessment of the significance of these data difficult. However, it is noted that no method of wound closure precluded the occurrence of a postoperative subcutaneous wound abscess.

The incidence of postoperative intraperitoneal abscess following appendectomy, according to the use or nonuse of peritoneal drainage, in the patients showing the more

Table 2

Suppurative Complications of Appendectomy

Pathologic Status	*Patients*	*Subcutaneous Abscess*	*Subfascial Abscess*	*Intraperitoneal Abscess*	*Patients With Abscess*
No appendicitis	75*	1	0	0	1 (1.3%)
Simple appendicitis	285	11	3	0	14 (4.9%)
Gangrenous appendicitis	45	4	0	1	4† (8.9%)
Perforative appendicitis	25	5	2	2	9 (36%)
Appendiceal abscess	15	3	0	2	4† (27%)
TOTAL	445	24	5	5	32 (7.2%)

*Appendix not removed at time of laparotomy in 3 patients.
†One patient had two separate abscesses.

Table 3

Incidence of Postoperative Subcutaneous Wound Abscess According to the Pathologic Findings and Technic of Skin Closure

Pathologic Status	No Drainage Patients	No Drainage Abscess	Subcutaneous Drain Patients	Subcutaneous Drain Abscess	Delayed Closure Patients	Delayed Closure Abscess*
No appendicitis	74	1	1	0	0	—
Simple appendicitis	278	7	6	3	1	1
Gangrenous appendicitis	33	2	10	2	2	0
Perforative appendicitis	9	1	9	4	7	0
Appendiceal abscess	3	1	8	1	4	1
TOTAL:	397	12 (3%)	34	10 (29%)	14	2 (14%)

*Secondary closure by granulation because of subcutaneous suppuration.

advanced stages of appendicitis can be ascertained from table 4. There was a lower incidence of postoperative intraperitoneal abscess in the patients in whom peritoneal drainage was used. However, the small number of patients in each group makes this difference of questionable significance.

Table 4

Incidence of Postoperative Intraperitoneal Abscess According to the Pathologic Findings and the Use of Intraperitoneal Drains

Pathologic status	No Intraperitoneal Drain Patients	No Intraperitoneal Drain Abscess	Intraperitoneal Drain Patients	Intraperitoneal Drain Abscess
Gangrenous appendicitis	41	1	4	0
Perforative appendicitis	14	2	11	0
Appendiceal abscess	4	1	11*	1
TOTAL:	59	4 (6.8%)	26	1 (3.8%)

*Drain in abscess cavity in some instances.

A postoperative regimen of antibiotics was used in 113 patients. An antibiotic regimen was begun in all patients who were found to have perforative appendicitis (with or without abscess) at the time of appendectomy. In each of the other three clinicopathologic categories, some patients were given antibiotics postoperatively and others were not. The incidence of postoperative suppurative complications in these patients according to the use or nonuse of antibiotics is recorded in Table 5. The incidence of postoperative suppurative complications in the 113 patients receiving postoperative antibiotics is tabulated according to the antibiotic regimen used in table 6.

Table 5

Effect of Postoperative Antibiotics on the Incidence of Suppurative Complications of Appendectomy for Nonperforative Appendicitis

Pathologic Status	No Antibiotics Patients	No Antibiotics Abscess	Antibiotics Patients	Antibiotics Abscess
No appendicitis	60	1	15	0
Simple appendicitis	246	9	39	5
Gangrenous appendicitis	26	0	19	4
TOTAL:	332	10 (3%)	73	9 (12%)

Table 6

Incidence of Suppurative Complications According to the Regimen of Postoperative Antibiotics

Antibiotic Regimen	Patients	Abscess
Penicillin and streptomycin	63	15 (24%)
Tetracycline	17	1 (5.9%)
Penicillin	14	1 (7.1%)
Penicillin, streptomycin, and tetracycline	5	1 (20%)
Penicillin and chloramyphenicol	4	2 (50%)
Penicillin, streptomycin, and chloramphenicol	4	1 (25%)
Miscellaneous	6	1 (17%)
TOTAL:	113	22 (19%)

The incidence of suppurative complications according to the use of each specific antibiotic (singly or in combination) can be seen from table 7. It cannot be concluded from the data of tables 5, 6 and 7 that the postoperative administration of antibiotics is effective in the prevention of postoperative suppurative complications. In fact, they suggest that antibiotics are not effective in accomplishing this purpose. However, it is realized that even within each clinicopathologic category of patients there were variations in the severity of the in-

Table 7

Incidence of Suppurative Complications of Nonperforative and Perforative Appendicitis According to the Use of Each Specific Antibiotic Agent (Singly or in Combination)

Antibiotic	Nonperforative Patients	Nonperforative Abscess	Perforative Patients	Perforative Abscess
Penicillin	55	8 (15%)	36	12 (33%)
Streptomycin	39	7 (18%)	33	11 (33%)
Tetracycline	21	1 (4.8%)	3	1 (33%)
Chloramyphenicol	3	1 (33%)	8	3 (37%)

flammatory process and antibiotics probably were given selectively to the patients who had the more advanced or more complicated variants of acute appendicitis. The use of chloramyphenicol, more especially, was reserved for patients found to have a more extensive septic process. These data also suggest that there is a higher incidence of postoperative suppurative complications following the use of a combination of penicillin and streptomycin than that which follows the use of a broad spectrum antibiotic such as tetracycline (see tables 6 and 7).

Each of the 32 patients who developed a postappendectomy suppurative complication was treated by surgical drainage of the purulent collection and, in most instances, the continuation or institution of an antibiotic regimen. Drainage of the suppurative process was accomplished through the region of the original incision with one exception, that of a subhepatic intraperitoneal abscess which necessitated a separate incision for drainage. Treatment was successful in each patient in ultimately effecting a cure of the suppurative complication without permanent sequelae.

Major complications other than those secondary to suppurative or septic processes were observed in certain of the patients undergoing appendectomy during the period of this study. In no instance, however, was there a permanent disability or fatality in the entire series of 458 patients.

Discussion

Many problems are encountered in attempting to evaluate a clinical series such as the one in this study. First, the classification of the pathologic stage of appendicitis must be arbitrary in certain instances. Many variables not considered in this study possibly influence the operative management, postoperative management, and the propensity for the postoperative appearance of a suppurative complication. A definitive determination of the presence or absence of a postoperative suppurative complication is not always possible; undoubtedly, some patients showed signs of postoperative sepsis due to suppuration which resolved undetected. Also, septicemia resulting from postoperative sepsis was not considered in this study. Another difficulty in evaluating such a study is the large number of patients necessary for the results obtained to be statistically significant. The findings of the present report must be interpreted in the light of these inescapable limitations; nevertheless, critical analysis of the available data is the only possible means to arrive at a more complete understanding of the problems related to the occurrence and management of suppurative complications following appendectomy for appendicitis.

There has been a steady decrease in the mortality associated with acute appendicitis during the past few decades. However, postoperative sepsis still accounts for the majority of the deaths secondary to appendicitis.[1-4] The incidence of postoperative suppurative complications, according to the pathologic stage of the appendicitis, in the present series of patients does not differ greatly from that observed in a much larger series of patients by Barnes and associates.[2]

No beneficial effect of subcutaneous drainage in the prevention of a postoperative subcutaneous abscess, regardless of the stage of appendicitis, could be demonstrated by analysis of the data obtained from the present series of patients. The data suggest, however, that intraperitoneal drainage, or that from an abscess cavity in the presence of the more advanced stages of appendicitis, decreases the incidence of postoperative intraperitoneal suppurative complications. The effectiveness of intraperitoneal drainage in the presence of perforative appendicitis has been described by others.[4,5]

No beneficial effect from the use of antibiotics postoperatively in the prevention of postoperative suppurative complications in patients with nonperforative appendicitis, could be demonstrated from the data of the present study. Similarly, the effectiveness of the prophylactic use of antibiotics for the prevention of suppurative complications following elective appendectomy or appendectomy for nonperforative appendicitis, could not be proven by studies reported by others.[2-4,6] One of the most critical determinants in predicting the morbidity and mortality of acute appendicitis is the presence or absence of perforation of the appendix.[2-5] Several factors have contributed to the

lowering of the incidence of postoperative sepsis and mortality in patients with perforative appendicitis during the past few decades. Undoubtedly, the lower morbidity and mortality observed in the more advanced stages of appendicitis (perforative appendicitis with or without abscess formation) since the advent of antibiotics must in part be the result of their use.[1-4]

Summary

A study of a consecutive series of 458 patients who had an appendectomy for acute appendicitis has been made. There were 34 postoperative suppurative complications in the 445 patients whose charts were available for review. Incision and drainage of the postoperative abscess (usually under antibiotic coverage) effected a cure in each instance.

The more advanced the stage of appendicitis, the greater was the incidence of postoperative suppurative complications. No beneficial effect of drainage of the subcutaneous space or delayed wound closure could be demonstrated in the prevention of a postoperative subcutaneous abscess. Intraperitoneal drainage of the abscess cavity in the advanced stages of acute appendicitis seemed to lessen the incidence of postoperative intraperitoneal abscess. No beneficial effect from the postoperative use of antibiotics (more especially the combination of penicillin and streptomycin) could be demonstrated in patients with nonperforative appendicitis. However, antibiotic treatment undoubtedly favorably affected the postoperative morbidity in patients who had perforative appendicitis.

References

1. Babcock, J. R. and McKinley, W. M.: Acute Appendicitis: An Analysis of 1,662 Consecutive Cases, Ann. Surg. 150:131, 1959.

2. Barnes, B. A., Behringer, G. E., Wheelock, F. C. and Wilkins E. W.: Surgical Sepsis: Analysis of Factors Associated with Sepsis Following Appendectomy 1937-1959), Ann. Surg. 156:703, 1962.

3. Cantrell, J. R. and Stafford, E. S.: The Diminishing Mortality From Appendicitis, Ann. Surg. 141:749, 1955.

4. Foster, J. H. and Edwards, W. H.: Acute Appendicitis in Infancy and Childhood: A Twenty Year Study in a General Hospital, Ann. Surg. 146:70, 1957.

5. Gross, R. E.: The Surgery of Infancy and Childhood, Philadelphia, W. B. Saunders Co., 1953.

6. Eiseman, B., Robinson, R. M. and Brown, J. H.: Simultaneous Appendectomy and Herniorrhaphy Without Prophylactic Antibiotic Therapy, Surgery 51:578, 1962.

Bronchopulmonary Aspergillosis—M. J. Campbell (8000 S. Racine Ave., Chicago) and Y. M. Clayton. Amer. Rev. Resp. Dis. 89:186 (Feb.) 1964.

The clinical, laboratory, and immunological findings in 272 patients were investigated for bronchopulmonary aspergillosis at the Brompton Hospital, London. These included 23 patients with aspergillomas and 87 with allergic aspergillosis. *Aspergillus fumigatus* could not be isolated from the sputum of every patient with aspergillosis; in 26% of aspergilloma patients an atypical, poorly-sporing variant of the fungus was cultured. Serum precipitins against *A fumigatus* were an invariable finding in patients with aspergillomas but were demonstrated in only 70% of the patients with allergic aspergillosis. Immediate skin hypersensitivity with *A fumigatus* extracts were found in 86 of the 87 patients with allergic aspergillosis and its demonstration in 5 of the aspergilloma patients was probably due to coexistent allergic hypersensitivity to the fungus.

From the Executive Director

MEDICAL DIGEST

News of Interest to Doctors in Tennessee

Physician Ownership of Drugstores, Drug Repackaging Houses & Pharmaceutical Companies

Information to All Physicians on Ownership of Drugstores and Repackaging Houses

● This is to advise physicians of Tennessee of recent action by the Federal Government, certain state governments and the American Medical Association relative to physician ownership of drugstores, drug repackaging houses and pharmaceutical companies.

Representatives of the Senate Subcommittee on Antitrust and Monopoly recently visited AMA Headquarters, investigating this subject. The Senate Subcommittee is studying "the incipient monopoly through physician ownership or financial interest in pharmacies and pharmaceutical manufacturing and repackaging companies".

The Senate Subcommittee staff sought to examine AMA letters and other written communications relating to physician ownership of drugstores and drug repackaging houses. It was further learned that the Subcommittee intends to hold hearings on these subjects.

As you may know, during the past year physician ownership of drugstores has been curtailed by action in four states. Statutes have been adopted in California and Maryland which, in effect, prohibit physician ownership of pharmacies. North Dakota has restricted permits to operate pharmacies to registered pharmacists or a partnership of registered pharmacists or a corporation or association, the majority stock in which is owned by registered pharmacists actively and regularly employed in and responsible for the management, supervision and operation of the pharmacy.

At the 1963 Annual Convention the AMA's House of Delegates adopted the following statement on physician ownership of drugstores:

> "Section 7 of the Principles of Medical Ethics provides: 'Drugs, remedies or appliances may be dispensed or supplied by the physician provided it is in the best interests of the patient.' Under this language it cannot be considered unethical for a physician to own or operate a pharmacy <u>provided there is no exploitation of his patient."</u>

Exploitation of a patient might exist if a physician: (1) overprescribes, (2) steers patients to physician owned pharmacies, (3) refuses to give patients a copy of their prescriptions, (4) prescribes in a code known only by certain pharmacies, or (5) maintains a direct telephone line to certain pharmacies.

In addition the Judicial Council has stated that it is unethical for a physician to lease space to a pharmacy on a percentage of gross basis.

At the 1963 Annual Convention, the House of Delegates of AMA also adopted the following statement on drug repackaging houses:

> "It is unethical for a physician to have a financial interest in a drug repackaging company."

Subsequently, the Judicial Council adopted the following statement concerning the meaning of the term "repackaging company".

"The term 'repackaging company' as used by the Judicial Council and approved by the House of Delegates of AMA refers to a drug company which markets under its own label or trade names drug products manufactured by others with the objective that physicians having a financial interest in the drug company will prescribe its drugs to the patient."

The Senate Subcommittee informed the AMA that the Committee was in possession of the names of from forty to fifty drug repackaging companies throughout the country. At the time, it was not known if physicians were involved in the ownership of all of them. The American Medical Association requested that the committee forward the names and addresses of the companies to them.

AMA-ERF Contributions

● Through the efforts of the TMA Committee on American Medical Association Education and Research Foundation, contributions from Tennesseans in 1963 exceeded those received in 1962. Allocation made in 1963 were as follows: University of Tennessee College of Medicine, $15,190.73; Vanderbilt University School of Medicine, $12,138.41; and Meharry Medical College, $6,603.91. This was a total of $33,933.05 contributed to schools of medicine in Tennessee.

State Medical Journals Losing Advertising on Economic Grounds

● It's no secret - - - TMA's Journal is losing income from advertising. National medical publications are much more attractive to pharmaceutical and drug advertisers and their agencies than state medical journals because of lower readership costs.

This was the observation made at the 1963 State Medical Journal Conference in Chicago. It was pointed out that buying practices in the pharmaceutical field have changed in recent years and that medical ad-men today are much more conscious of their company's profits and costs. Physician readership interest in state journals has declined drastically. Advertisers do not buy as they once did; they buy opportunities to sell their product stories at the best market price.

Congressman Brock Surveys Third District On Medicare

● The results of Representative Bill Brock's recent legislative questionnaire, answered by some 15,000 citizens in the Third Congressional District, have been officially released. Brock received over 15,000 answers from an estimated mailing of 87,000.

On the question: MEDICARE—Do you favor a medical care program for the elderly through—

(a) increasing Social Security taxes?
(17.9 percent answered Yes)

(b) a tax reduction to purchase private insurance?
(20.8% replied Yes)

(c) voluntary plans without federal participation?
(53.1% replied Yes)

Brock expressed gratification that the sentiment was in accord with his position in Congress.

Did You Know?

● . . . That an estimated 145 million Americans had some form of health insurance at the end of 1963 . . . That 3.6 million more persons had health insurance in 1963 than in 1962 . . . Total health care benefits paid to insured persons in 1963 by all insuring organizations came to an estimated $7.8 billion . . . That 60 percent of the total non-institutionalized aged population in the U.S.—10.3 million persons—had some form of health insurance at the end of 1962.

Public Service

THE TENNESSEE TEN

Hadley Williams, Public Service Director



Physician Delegation Visits Washington

● A delegation of physicians representing the Tennessee Medical Association visited Washington, D.C., March 5, to confer with our elected congressmen and senators. The group met for breakfast to outline the day's activities and are shown here, left to right, first row: Dr. J. Kelley Avery, Union City; Dr. Alexander Leech, Jackson, president of Tennessee Veterinary Medicine Association; Dr. Oscar McCallum, Henderson; Mr. Cecil Dixon, AMA Washington staff; Mr. Jim Foristel, AMA Washington staff; Dr. John H. Burkhart, Knoxville; Mr. Hadley Williams, TMA staff. Second row: Dr. Richard Sexton, Knoxville; Dr. B. G. Mitchell, Memphis; Dr. Kent Carter, Kingsport; Mr. Harold Slater, AMA Washington staff; Dr. W. G. Quarles, Jr., Livingston; Dr. Tom E. Nesbitt, Nashville and Dr. Roy Lester, Director of the AMA Washington Office are standing. Third row: Dr. Morse Kochtitsky, Nashville; Dr. Charles A. Trahern, Clarksville; Dr. B. F. Byrd, Jr., Nashville; Dr. W. Powell Hutcherson, Chattanooga; Dr. D. Gordon Petty, Carthage. Fourth row: Dr. K. M. Kressenberg, Pulaski; Dr. Robert M. Finks, Nashville; Mr. J. E. Ballentine, TMA staff; Dr. W. O. Vaughan, Nashville; Dr. James M. Hudgins, Nashville; and Mr. Dick Philleo of AMA Washington staff.

The day's activities included a group visit with Senators Albert Gore and Herbert Walters and personal visits with individual congressmen. A luncheon was hosted by TMA in the House Speakers Dining Room of the Capitol. Congressman Clifford Davis of Memphis was toastmaster and introduced the congressional delegation while Dr. Tom Nesbitt, TMA Legislative and Public Policy Committee chairman, introduced and spoke for the TMA delegation.

As Others See It—Quotes and Comments

● The following are excerpts of editorials that have appeared recently in Tennessee newspapers:

MEMPHIS-COMMERCIAL APPEAL:

"Not so long ago it was called the King-Anderson Bill.

"This year it's known by its short and familiar title, Medicare. And this year it's back again, as a political football of the liberals, to be kicked around in Congress and snatched up in the presidential and congressional election campaigns.

"Medicare is a scheme to open the door to federal control of hospitals, nursing and the practice of medicine.

". . . It is not the medical profession which will suffer, but the taxpaying public and the people who need medical care but lack the means to pay for it.

"Under Medicare, here is what would happen:

"Elderly people in need of help to pay medical bills would be fooled. Medicare simply softens the blow by absorbing some hospital bills. It does not reduce payments to doctors.

"Medicare would encourage more of the indigent to seek charity hospitalization for minor ills, thus increasing hospital costs and creating an even greater need for already scarce beds and rooms. The result could be to turn hospitals into medical barracks.

"The need for expensive, modern technological equipment would be increased and the only answer would be for the Government to spend Medicare tax revenue for equipment rather than treatment.

"Demand for physicians' services would increase. Doctors are now in short supply and overworked, so to meet the demand the Government would have to divert more Federal funds to the encouragement of medical students, at taxpayer expense.

"Social Security taxes, already on a rising scale, would be increased. The base in total annual income on which Social Security taxes are withdrawn would rise, and the percentage taken out of each paycheck and matched by each employer would go up. Later boosts would be inevitable.

"Medicare is a fraud.

"Medicare simply moves the initiative from the individual to the Federal Government and soaks the wage earner who is trying to meet his own family responsibilities.

"Not by accident does talk of Medicare gather tempo in an election year. Its advocates will lose to the voices of reason. But they will appeal to the idle, indolent and ignorant with the idea that they have fought the good fight to bring them something for nothing. . . ."

COLUMBIA HERALD:

"The Medicare proposal—which would provide certain medical services for everyone drawing social security payments, whether or not the needed or wanted them—is very much alive.

". . . But it is bad in principal. Objections fall into three main categories. One is that government control of health and medical care would both increase costs and lower quality. Another is that unpredictable costs, arising as the program expanded, could eventually threaten the solvency of the present social security cash benefits system. And the third is that the use of a social security program for hospital care of elderly people could be the opening wedge in the establishment of compulsory government medicine for all, with its attendant bureaucracy, red tape and a decline in standards. . . ."

With snakebite season arriving, this study of snakebites in Tennessee may prove interesting and instructive. Some 80 doctors will need to treat snakebite among Tennesseans this year.

Venomous Snakebites In Tennessee*

HENRY M. PARRISH, M.D., Dr. P.H. and LOUIS P. DONOVAN, M.S., Columbia, Mo.

Snakebite accidents occur frequently in the Southeastern part of the United States. However, there are few studies which indicate the true extent of this problem. Snakebite accidents have definite epidemiologic characteristics which assist in understanding why, when, where and how they occur. The purpose of this study is to describe the epidemiology of venomous snakebites in Tennessee, to relate some medical findings associated with these bites, and to briefly review current concepts of snakebite treatment.

Venomous Snakes

Conant[1] lists the following species and subspecies of venomous snakes as indigenous to Tennessee: the timber rattlesnake *(Crotalus horridus horridus)*, the canebrake rattlesnake *(Crotalus horridus atricaudatus)*, the western pigmy rattlesnake *(Sistrurus miliarius streckeri)*, the northern copperhead *(Agkistrodon contortrix mokeson)*, the southern copperhead *(Agkistrodon contortrix contortrix)*, and the western cottonmouth *(Agkistrodon piscivorus leucostoma)*. Timber and canebrake rattlesnakes are related and look very much alike. Also, the southern copperhead is a paler, pinker relative of the northern copperhead. Coral snakes are not native to the State.

All of the venomous snakes of medical importance in Tennessee are pit vipers. They are so named because of a characteristic pit which is located between the eye and the nostril on each side of the body. Pit vipers also are identified by elliptical pupils and by two well-developed fangs which protrude from the maxillae when the snake's mouth is opened. Rattlesnakes have rattles which are attached to their tails. Copperheads, cottonmouth moccasins and harmless snakes do not have rattles. The copperhead has a reddish-brown head and dark, hourglass-shaped crossbands on the body. Harmless snakes do not have facial pits, they have round rather than elliptical pupils, and while they have teeth, they lack fangs.

Methods of Study

A questionnaire and letter explaining the purpose of this study were mailed to a "selected" group of Tennessee hospitals listed in Hospitals *(Journal of the American Hospital Association)* Guide Issue. The hospitals selected for this study were general hospitals, children's hospitals and college infirmaries. Army, Navy, Coast Guard, Public Health Service, Air Force and Veterans Administration hospitals also were sent questionnaires. Maternity, tuberculosis and mental hospitals were omitted since they would not be expected to treat snakebite victims. A total of 115 Tennessee hospitals comprise the study group. Each hospital was requested to report all inpatients admitted to the hospital for snakebite treatment during 1958 and 1959.

Most hospitals do not code and tabulate the diagnoses of emergency room and outpatient clinic visits. Since some snakebite victims are not admitted to the hospital as inpatients, it seemed essential to ask a sample of practicing physicians how many snakebite victims they treated on both an outpatient (office, home, emergency room, etc.) and on an inpatient basis. Previous surveys have shown that most people with venomous snakebites are treated by general practitioners, surgeons, internists, pediatricians and orthopedic surgeons.[2,3] Therefore, a random sample of one-third of all the

*From the Department of Community Health and Medical Practice, School of Medicine, University of Missouri, Columbia, Mo.

This investigation was supported in part by Public Health Service research grant GM 11268-02 from the Division of General Medical Sciences, Public Health Service.

Tennessee physicians in these categories of practice who were listed in the A.M.A. American Medical Directory were sent questionnaires.

Death certificates for fatal snakebite cases were obtained from the Tennessee Department of Public Health.

Results

This report is based on questionnaires returned by 110 (95.6%) of 115 Tennessee hospitals. It is supplemented by questionnaires returned by 418 (77.6%) of 539 practicing physicians in the State. And by one death certificate from the Tennessee Department of Public Health.

Incidence. Tennessee hospitals reported a total of 58 inpatients treated for venomous snakebites during 1958 and 1959. The physicians' reports, when adjusted to account for all of the Tennessee physicians in the practice categories mentioned, indicated that approximately 43 inpatients and 36 outpatients were treated for snakebites each year. This difference between inpatient reports by hospitals and the estimated inpatients treated by physicians can be accounted for largely by the fact that 10 of the less populous counties from which physicians reported bites do not have hospitals listed in the Guide Issue of hospitals. However, these counties do have small hospitals and private clinics in which physicians treated 16 inpatients and 11 outpatients for snakebites each year. Physicians in counties from which hospital case reports were received estimated that 27 inpatients and 25 outpatients were treated per year. The physicians' estimate of 27 inpatients per year was amazingly close to the 29 to 30 cases per year reported by hospitals.

Therefore, we estimate that approximately 79 people (43 inpatients and 36 outpatients) are bitten by venomous snakes every year in Tennessee, an incidence of 2.2 per 100,000 people per year.

Geopathology. The geographic distribution of snakebites reported in Tennessee during 1958 and 1959 may be seen in figure 1. The lightly shaded counties are those from which hospitals reported inpatients treated for snakebites. An appropriate symbol is used to mark each hospitalized patient who was bitten by a specific kind of snake. The darker shaded counties represent counties from which physicians reported snakebite cases, but from which no snakebite cases were reported by hospitals.

Of the 58 snakebites, 31 (53.5%) were by copperheads, 7 (12.1%) by rattlesnakes, 3 (5.1%) by cottonmouth moccasins, and 17 (29.3%) by unidentified venomous snakes. Copperhead bites happened in all parts of the State. This is in keeping with their statewide distribution. Most rattlesnake bites were reported from the Southeastern portion of the State in the Hamilton, Bledsoe, Cumberland, Roane County area. However, 2 rattlesnake bites happened in Maury County. All of these rattlesnake bites probably were inflicted by *Crotalus sp.* (canebrake and timber rattlesnakes) rather than by pigmy rattlesnakes of the genus, *Sistrurus.* Two cottonmouth moccasin bites were reported from the Shelby-Haywood area in the Southwestern portion of the State and one was reported from Maury

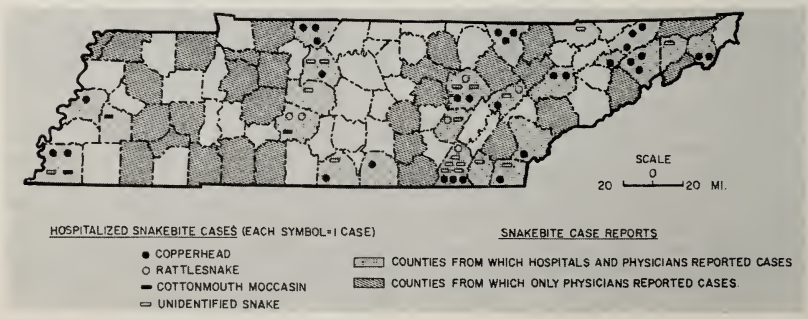


FIG. 1. Geographic Distribution of Venomous Snakebites in Tennessee, 1958 and 1959.

County. The range for cottonmouth moccasins is in the western part of the State.

Figure 1 shows four multicounty foci where most venomous snakebites in Tennessee occur. These include: (1) the Greene, Washington, Carter, Hawkins, Hamblen County area in northeastern Tennessee; (2) the Hamilton, Bledsoe, Cumberland, Roane County area in southeastern Tennessee; (3) the Robertson, Davidson, Williamson, Maury County area in north central Tennessee; and the Shelby, Haywood, Lauderdale County area in southwestern Tennessee.

Temporal Relationships. The monthly distribution of snakebites is shown in table 1.

Table 1

Seasonal Distribution of Venomous Snakebites in Tennessee, 1958 and 1959

Month	*No. Bites*	*Month*	*No. Bites*
January	0	July	12
February	0	August	14
March	0	September	12
April	0	October	2
May	3	November	0
June	14	December	0

No snakebites occurred during the colder months of the year—November through April. In general, snakes are inactive and/or hibernating during the colder months of the year. The first 3 snakebites happened in May. A sharp increase in bites occurred in June, and from 12 to 14 cases per month were reported for June, July, August, and September. There was a sharp decline to 2 cases in October. This striking seasonal distribution of snakebites coincides with the time that snakes are most plentiful and active and with the time that people are most likely engaged in out-of-doors occupations and recreation. Similar "seasonal epidemics" of venomous snakebites have been observed in New England and Florida.[2,3] There were two peaks during the day when most snakebites happened. These were the three hour period from 9:00-11:59 A.M. when 14 (24%) people were bitten and the six hour period from 3:00-8:59 P.M. when 27 (47%) people suffered snakebites. The number of bites by three hour periods was as follows: 6:00-8:59 A.M., 4 bites; 9:00-11:59 A.M., 14 bites; 12:00 noon-2:59 P.M., 4 bites; 3:00-5:59 P.M., 18 bites; 6:00-8:59 P.M., 9 bites; 9:00-11:59 P.M., 4 bites. No bites were reported from midnight to 6:00 A.M. In 5 cases the time was not recorded.

Patient's Sex, Race and Occupation. Thirty white males, 22 white females, 3 nonwhite males and 3 nonwhite females were admitted to Tennessee hospitals for snakebite treatment during 1958 and 1959. Using the 1960 census data for the population of Tennessee, the snakebite rates per 100,000 population were:—2.06 for white males; 1.07 for nonwhite males; 1.45 for white females and 0.95 for nonwhite females. All of the nonwhites were Negroes. Whites had higher inhospital treatment rates than nonwhites. This difference might be related to one or more of the following considerations: (1) nonwhites are not bitten by venomous snakes as frequently as whites; (2) when bitten by venomous snakes, nonwhites do not seek medical attention as often as whites; or (3) nonwhites seeking medical attention for snakebites are more likely to be treated on an outpatient basis, whereas more whites are admitted to hospitals for treatment.

The age distribution of Tennessee snakebite victims is shown in table 2. The largest number of bites happened to children 0-9 years of age, 9 bites, and those 10-19 years of age, 16 bites. Indeed, 43% of all snakebites happened to children and young adults less than 20 years of age. However, these figures become less striking when bite rates are calculated for these age groups. Age-specific bite rates are much more meaningful since they take into account the population at risk in a particular age group. The highest biannual bite rates (2.44) per 100,000 population were for the 10-19 and the 60-69 year age groups. The lowest bite

Table 2

Age Distribution of Hospitalized Snakebite Victims in Tennessee, 1958 and 1959

Age Group (years)	*Population at Risk**	*No. Bites*	*Rate per 100,000***
0-9	769,225	9	1.17
10-19	655,752	16	2.44
20-29	447,600	7	1.56
30-39	469,339	4	0.85
40-49	433,070	8	1.85
50-59	352,502	6	1.70
60-69	245,832	6	2.44
70 or more	193,715	1	0.52
Not stated	—	1	—

*Based on the 1960 Census of the Population of Tennessee.

**These rates are based only on hospitalized patients for which information was available.

rate was for the 70 and over age group.

An analysis of the occupational categories of the patients showed 23 were children, 13 were housewives, 6 were farmers, 5 were laborers not including farm and mine laborers, 3 were unemployed, one was a private household worker and one was a professional snake handler. The occupations of 6 people were not recorded.

Activity and Place. It is commonly thought that most snakebites occur while people are hunting, enjoying other recreation or working in the woods. This is not true! Ten bites happened to children playing either in their yard or elsewhere, 8 happened to people working on a farm or ranch, 6 while working or walking in the yard, 4 while reaching into an obscure place, 3 while handling a snake, 2 while picking up wood or logs, one while hunting, one while swimming, and one while picnicking. The activity was not recorded for the other cases.

By far the largest number of bites, 16, occurred in the victim's yard. Eight occurred in the woods, 7 in a field away from the house, 6 on a farm or ranch—not near the house, 2 near a highway, and one near water. The place the bite happened was not listed for the remaining bites.

Site and Severity of Bites. Fifty-seven (98%) of the 58 patients were bitten on the extremities, 36 (62%) on the lower extremities and 21 (36%) on the upper extremities. One youth was bitten on his lip while feeding a "pet" rattlesnake. Figure 2 illustrates the anatomic parts of the body where the bites were inflicted. The fingers were the parts most often bitten on the upper extremities. The most frequently bitten part on the lower extremities were the legs below the knees but including the ankles. The 15 bites on the feet and the one bite on the toes might have been prevented if the victims had been wearing shoes. Heavy trousers and three-quarter length boots afford protection against bites on the ankles and lower legs.

A modification of the clinical classification of pit viper venenations by Wood, Hoback and Green[4] was used to determine the severity of bites. Bites were classified as follows:

Grade O. No venenation. Fang or tooth marks, minimal pain, less than 1 inch of surrounding edema and erythema. No systemic involvement.

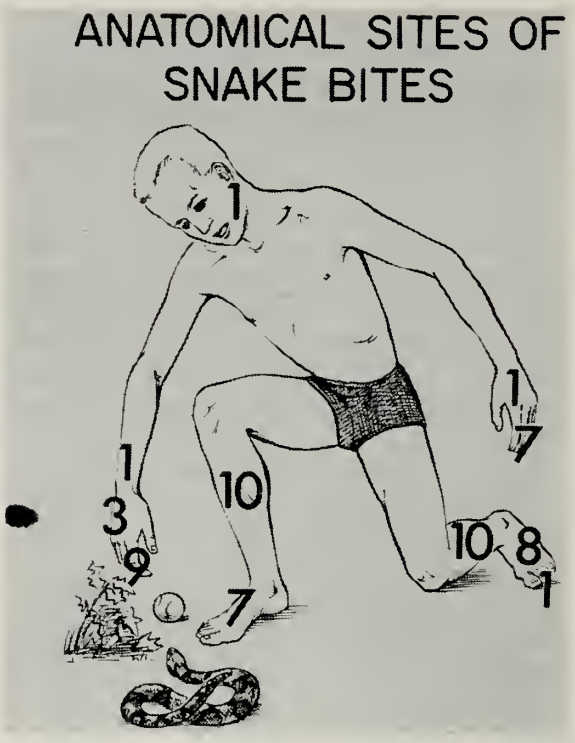


FIG. 2. Anatomic Sites of Bites Inflicted by Venomous Snakes in Tennessee.

Grade I. Minimal venenation. Fang or tooth marks, moderate pain, 1 to 5 inches of surrounding edema and erythema in first 12 hours after bite; no systemic involvement usually present.

Grade II. Moderate venenation. Fang or tooth marks, severe pain, 6 to 12 inches of surrounding edema and erythema in first 12 hours after bite; systemic involvement may be present—nausea, vomiting, giddiness, shock or neurotoxic symptoms.

Grade III. Severe venenation. Fang or tooth marks, severe pain, more than 12 inches of surrounding edema and erythema in first 12 hours after bite; systemic involvement usually present as in Grade II.

The classification of venenation (venom poisoning) for these 58 hospitalized cases was: 12 (20%) were Grade O; 24 (41%) were Grade I; 17 (29%) were Grade II; 4 (7%) were Grade III; and for one case (2%) the severity was not stated. There was one death among the 58 hospitalized cases, providing a case-fatality rate of 1.7 per cent. When one realizes, however, that about half of all venomous snakebite cases were managed on an outpatient basis, the case-fatality rate probably is less than 1 per cent. This is verified by the fact that there were only 3 snakebite deaths in Tennessee for the 10 year period, 1950-1959.[5]

This finding should be reassuring to physicians who treat snakebites in Tennessee.

It seems likely that most of the bites by unidentified snakes in Tennessee were inflicted by copperheads, because 61% of the hospitalized cases were either Grade O or Grade I venenation and only 7% were Grade III venenation. By way of contrast, 20% of snakebite cases in Florida resulted in Grade III venenation.[2] Over 50% of snakebites in Florida were inflicted by rattlesnakes, but only 10% of Tennessee snakebites resulted from rattlesnake bites. In general, rattlesnakes produce more severe venenations than do copperheads.

Treatment

The current treatment of North American pit viper (rattlesnake, cottonmouth moccasin and copperhead) bites includes both minor surgery and medical forms of treatment. A constricting band (tourniquet) should be applied lightly to the involved extremity several inches proximal to the bite. It should *not* occlude the arterial circulation and should be released every 10 to 15 minutes for a minute or two. As edema resulting from venom poisoning spreads, the constricting band should be advanced to keep just ahead of the swelling. The purpose of the constricting band is to impede the spread of venom until incision and suction can be used to remove the venom mechanically and/or until antivenin can be administered to neutralize the venom.

Incision and suction (I.S.) is effective in removing venom from experimental animals up to about 120 minutes after the venom is injected. The sooner it is used, the larger the amount of venom that can be removed. Suction should be continued for about one hour. We have found the suction cups supplied in the Cutter and the Becton-Dickinson snakebite first-aid kits effective for removing pit viper venom. Incisions, one-quarter inch long and one-eighth to one-quarter inch deep, are made into the subcutaneous tissues over the fang punctures. A few (3 to 5) additional incisions may be made in the surrounding edematous tissues. A large number of incisions are not needed. Immobilization aids in limiting the spread of venom. However, if one must decide between immobilization or seeking prompt medical treatment, the latter should be sought.

The "3 A's" (antivenin, antibiotics, and tetanus antitoxin and/or toxoid) are recommended, in addition to I.S., in treating all serious pit viper bites. Antivenin Crotalidae Polyvalent (Wyeth) is effective in neutralizing the venoms of all North American pit vipers. It is not protective against venom of the coral snake. Since antivenin is manufactured from horse serum, the patient should receive a skin test before antivenin is given. For Grade I and Grade II venenations antivenin may be administered in the deltoid or gluteus muscles. In Grade III venenations, antivenin diluted in 1000 cc. of normal saline may be given intravenously. Studies with radioisotopes have shown that antivenin accumulates at the site of the bite more rapidly after intravenous administration than after intramuscular administration. We have found the following amounts of antivenin useful in treating the various Grades of venenation: Grade O (no venenation) requires no antivenin; Grade I (minimal venenation) may require 10 cc. (one ampoule) of antivenin; Grade II (moderate venenation) requires 30 to 40 cc. of antivenin; and Grade III (severe venenation) requires 50 cc. or more of antivenin.

Since snakes' mouths and venoms may harbor pathogenic organisms, antibiotics and tetanus antitoxin and/or toxoid should be given prophylactically. Gram-negative organisms predominate, hence a broad spectrum antibiotic is indicated. Penicillin used by itself is not adequate treatment.

Cortisone and ACTH do not affect the survival rate of animals poisoned with pit viper venoms. They probably should not be used during the first few days after venenation, although they may be beneficial later in treating serum sickness resulting from antivenin therapy. Antihistamines are contraindicated since they shorten the survival time of animals poisoned with pit viper venoms. Shock resulting from venom poisoning should be treated with infusions of blood, plasma, saline solution and vasopressor drugs. Meperidine hydrochloride and other analgesics may be given to relieve pain. Recently there have been re-

ports of excessive tissue necrosis and amputations associated with cold therapy such as packing an extremity in ice or using ethyl chloride. In our opinion, cold therapy should not be used in treating snakebites.

Summary

An estimated 79 people are bitten by venomous snakes every year in Tennessee. Of these, approximately one-half are admitted to hospitals for treatment and one-half are treated on an outpatient basis in hospital emergency rooms and in physicians' offices.

Of 58 snakebite victims treated in Tennessee hospitals during 1958 and 1959, 31, (53.5%) were bitten by copperheads, 7 (12.1%) by rattlesnakes, 3 (5.1%) by cottonmouth moccasins, and 17 (29.3%) by unidentified venomous snakes. Seasonal "epidemics" of snakebites occur in Tennessee with 52 of the 58 cases reported from June through September. Fourteen (24%) of the bites happened from 9:00-11:59 A.M. and 27 (47%) from 3:00-8:59 P.M.

Males had higher bite rates than females and white people had higher rates than nonwhites. The occupational groups most frequently bitten were children—23 bites, housewives—13 bites and farmers—6 bites. Ninety-eight per cent of the bites were inflicted on the extremities—36% on the upper extremities and 62% on the lower extremities. There was only one death among the 58 hospitalized snakebite victims, a case-fatality rate of 1.7 per cent. The case-fatality rate for all snakebite cases (hospitalized plus nonhospitalized) was less than one per cent. Current snakebite treatment is discussed.

ACKNOWLEDGMENT: The authors cite with gratitude the technical assistance of the following persons: Genevieve Calescibetta, Judi Pummill, Maxine Bewley and Mary Ann Preu.

References

1. Conant, R.: A Field Guide to Reptiles and Amphibians of Eastern North America, Boston, Houghton Mifflin Co., 1958.

2. Parrish, H. M.: On the Incidence of Poisonous Snakebites in Florida: Analysis of 241 Cases Occurring During 1954 and 1955, Am. J. Trop. Med. 6:761, 1957.

3. Parrish, H. M., Badgley, R. F., and Carr, C. A.: Poisonous Snake Bites in New England, New England J. Med. 263:788, 1960.

4. Wood, J. T., Hoback, W. W., and Green, T. W.: Treatment of Snake Venom Poisoning with ACTH and Cortisone, Virginia M. Month. 82:130, 1955.

5. Parrish, H. M.: Analysis of 460 Fatalities From Venomous Animals in the United States, Am. J. M. Sc. 245:129, 1963.

Synthesis of Endogenous Cholesterol in Experimental Nephrosis—I. Goodrich (Medical College of Georgia, Augusta, Ga.) and W. S. Harms. Metabolism 13:141 (Feb.) 1964.

To elucidate the mechanism of hypercholesterolemia in the nephretic syndrome, various tissues of rats with amino-nucleoside-induced nephrosis were examined; these tissues were checked for incorporation or turnover rates, or both, of cholesterol formation following intraperitoneal injection of labeled precursors. The experiment was divided into three parts: (1) Serum cholesterol formation utilizing sodium acetate labeled with radioactive carbon 14 (acetate C^{14}) at various time intervals, the results indicated an increased cholesterol genesis in the early stages of nephrosis; (2) synthesis and deposition of cholesterol in various body tissues tripalnitin labeled with radioactive carbon 14 is utilized for both cholesterol fractions more efficiently than is acetate C^{14} in certain nephrotic and normal tissues; (3) cholesterol turnover in the skin utilizing acetate C^{14}—in nephrotic rats the cholesterol and cholesterol esters have shorter half-lives than in normal counterparts. Both the liver and skin may contribute to the nephrotic hypercholesterolemia.

This review is of the current status of medical management of thyrotoxicosis.

The Treatment Of Hyperthyroidism*

ROBERT B. GILBERTSON, M.D., Knoxville, Tenn.

The treatment of hyperthyroidsim is an interesting and rewarding experience for the clinician since there are few diseases that respond so dramatically to therapy. This paper will present the three current methods of therapy available for the treatment of hyperthyroidism. The three major methods of treatment are:

(1) Antithyroid drugs
(2) Antithyroid drugs followed by subtotal thyroidectomy
(3) Radioactive iodine

Factors to be considered in selecting the ideal form of treatment for patients with thyrotoxicosis are:

(1) Age of patient
(2) Presence of pregnancy
(3) Size of the gland
(4) Nodularity of the gland
(5) Recurrent thyrotoxicosis
(6) Complicating diseases
(7) An uncooperative patient
(8) Refusal of surgery

Ideal treatment of hyperthyroidism, as noted by Chapman,[1] should "Restore the patient to health and normal thyroid function in a reasonable length of time, with the least economic loss, and with minimal hazard."[1]

Iodine

Iodides were reported in the treatment of toxic goiter as early as 1840, by Von Basedow,[2] but were not widely accepted in treatment of hyperthyroidism until Plummer's report in 1923.[3] Iodides act on the thyroid by decreasing the breakdown of colloid and thus blocking the release of thyroxin from the gland.[4] The exact mechanism of this action by iodides is not known. It has been shown that this iodide effect is preserved in spite of exogenous administration of thyroid stimulating hormone. It is known that very small doses of iodides in the range of 4 to 6 mg. will control hyperthyroidism.[5] It is standard practice to give hyperthyroid patients saturated potassium iodide, 5 to 10 drops daily, to adequately prepare these patients for surgery. Five drops of potassium iodide contains approximately 250 mg. of iodide, and obviously even this relatively small amount of iodide is more than adequate to produce the desired effect. The effect of iodide therapy in thyrotoxicosis is usually apparent within 24 to 36 hours from its initial administration. It is interesting that the suppressive effect of iodide on the thyroid is limited primarily to hyperthyroid individuals, and only rarely does iodide administration produce any decrease in thyroid activity in the euthyroid individual. From the practical therapeutic standpoint it is important to remember that initial treatment of a thyrotoxic individual with iodides should be avoided if at all possible. Such therapy results in an increased amount of stored thyroid hormone since iodide blocks release of the hormone from the gland, and this in turn may delay the patient reaching a euthyroid state when thiourea derivatives are added to the treatment program. Excellent results are obtained by treating the patient initially with propylthiouracil or similar drugs until the euthyroid state is produced, then adding 5 drops of potassium iodide in the two weeks prior to a contemplated operation. Iodide used in this manner reduces the vascularity of the gland and makes the technical aspects of thyroidectomy much easier for the surgeon. "Toxic reactions to iodide consist of skin eruption, fever, parotitis, rhinitis, conjunctivitis, and hepatitis. These are relatively infrequent and usually not serious."[4]

Antithyroid Drugs

In 1943, Astwood introduced thiourea and thiouracil drugs into the treatment of hyperthyroidism.[6] These drugs block the synthesis of organic iodides in the gland and

*Read at the Symposium on Thyroid Dysfunction, the Annual Meeting of the Tennessee Medical Association, April 10, 1963, Knoxville, Tenn.

thereby synthesis of thyroxin. Propylthiouracil and methimazole (Tapazole) are the two drugs most commonly used in this country. Itrumil (5-iodo-2 thiouracil, sodium salt) is also used in preoperative management of hyperthyroidism by some authorities, since it also contains an iodide radical.[7] Propylthiouracil is usually given as a total dose of 300 to 400 mg., daily, in 3 divided doses, approximately at 8 hour intervals. Rarely 600 to 800 mg. of propylthiouracil or comparable doses of other antithyroid drugs are necessary to control a severely thyrotoxic individual. In a very toxic patient, it is often wise to give the antithyroid drug every 6 hours, to avoid the thyroid escape that occasionally occurs in an extremely toxic individual. Tapazole, or methimazole, is also given in a dosage range of 30 to 40 mg. daily in similar divided doses. Improvement with these drugs is not as rapid as is seen in the administration of iodides, but usually definite improvement occurs in 2 or 3 weeks. These drugs do not interfere with the secretion or action of thyroxin, and therefore one must wait until all thyroxin stores are depleted before there is a decrease in the metabolic rate. Depending upon the severity of the hyperthyroidism, the euthyroid state may not be evident for 2 to 4 months.[8] In the hyperthyroid individuals who are candidates for long-term antithyroid drug therapy, once the euthyroid state is produced, the maintenance dose is generally half or less of the initial dose that produced euthyroidism. This may be as low as 50 mg. a day with propylthiouracil once a patient is euthyroid on long-term medical therapy. Toxic effects of this group of drugs probably does not exceed 5%.[9] Fever, skin rash, leukopenia, and arthralgia are the more common toxic symptoms which may require changing to a different type of antithyroid drug, or discontinuing the drug completely. In a very small percentage of cases agranulocytosis may occur—a very serious complication. Vanderlaan and Chapman[10] reported less than a 0.5% incidence of agranulocytosis in their experience. A lupus-like syndrome has been observed as a toxic manifestation of antithyroid drug therapy.[8] It is interesting to note, as has been pointed out by Asper,[8] that 10% of hyperthyroid patients who have not been treated with any antithyroid medication had a white count of less than 4000. Lymphocytosis is also common in hyperthyroidism and should not be misinterpreted as early sensitivity to antithyroid therapy. However, if the granulocyte percentage drops below 40%, the dosage of the drug should be reduced immediately and the patient be observed closely for further evidence of granulocytic reduction.[8] Certainly if the granulocytes are less than 10%, the drug should be promptly discontinued, and it would be unwise to use any of the antithyroid drugs in the thiourea group as a substitute in this situation.[8]

Potassium perchlorate also has been used in therapy of thyrotoxicosis, but recently 4 cases of aplastic anemia, with a rapidly fatal outcome, have been reported following treatment with potassium perchlorate. It is no longer recommended in the treatment of hyperthyroidism.[11]

There is general agreement that antithyroid therapy is indicated in the preoperative management of hyperthyroidism. Controversy arises as to when long-term use of antithyroid drugs is indicated for specific treatment of hyperthyroidism. Hyperthyroidism associated with pregnancy is best treated with the use of antithyroid drugs.[1] It is important to give thyroid replacement therapy in conjunction with thiouracil drugs to prevent hypothyroidism during the course of a normal pregnancy.[8] The PBI is physiologically elevated in pregnancy, as a result of increase in the thyroid binding globulin in the blood. Therefore, the PBI should be kept in the high normal range throughout pregnancy. Thiouracil drugs cross the placental barrier, as well as being secreted into milk, and therefore breast feeding should be avoided during this treatment.[4] There seems to be fairly universal agreement that children are best treated with long-term antithyroid therapy, and subtotal thyroidectomy in children be reserved for the patients who do not respond to repeated courses of antithyroid therapy or cannot take the drugs for other reasons, such as severe toxic reactions. Adults in the age group under 40 years who have a diffuse toxic gland are also being treated with increasing frequency with

long-term antithyroid drug therapy.[1,4,8,9,12]

Advantages to medical therapy are:

(1) No hospitalization required.
(2) Only therapy that leaves the thyroid intact.
(3) Permanent complications are extremely rare.

Undesirable features are the need for, (1) prolonged therapy requiring a cooperative patient, and (2) the recurrence rate of approximately 50% upon withdrawing the drug. Duration of therapy should be from one to 3 years, with most authorities suggesting 18 months before discontinuing the therapy.[1,8,12] The ideal patient for medical therapy is a young patient with a small gland with recent onset of symptoms of hyperthyroidism.[1]

After drug therapy has been used for approximately one year, a suppressive test with tri-iodothyronine is worthwhile. If lack of suppression is revealed after one year, it usually implies that early recurrence is likely.[1] Asper believes there is no way to accurately predict which patient will have long remission following drug therapy. However, marked reduction in the size of the gland during treatment is a favorable sign of continued remission following discontinuance of the therapy.[8] Increase in the size of the gland during long-term antithyroid therapy often occurs as a direct result of the production of hypothyroidism, and this should be avoided by careful regulation of the required maintenance dose required to maintain a euthyroid state. If relapse occurs after discontinuing medical therapy, retreatment is often used, since one-third of the patients who relapse after the first treatment, will have a prolonged remission.[12]

Radioactive Iodine

Radioactive iodine therapy was not released for general clinical use until July 1946. This isotope has a half-life of 8 days and emits both gamma and beta rays. Eighty-five per cent are beta rays that have penetration in tissue of approximately 1 to 2 mm. The greatest disadvantages of radioactive iodine therapy are its unpredictability of dosage, its potential carcinogenic hazard, and the genetic effects, which are as yet unknown. It is pertinent to stress that there has been no case of thyroid cancer reported in adults treated with radioactive iodine.

Sheline[13] has reported 8 patients in a group of 256 patients who developed nodules between 5 and 14 years after radioactive iodine therapy. One patient, age 9 at the time of treatment, developed invasive adenoma (low-grade follicular carcinoma) 8 years following treatment, at the age of 17. This patient was treated by subtotal thyroidectomy and dessicated thyroid, and has remained asymptomatic and clinically free of disease. Duffy[14] noted that 0.4% of patients with exophthalmic goitre without any antithyroid therapy, had co-existing carcinoma of the thyroid. In adults, Duffy did not suggest restriction of therapeutic doses of radioactive iodine, since "there is no evidence, clinical or experimental, that radiation can cause cancer in adult thyroid tissue."

Leukemia, following radioactive iodine therapy has been reported. Green,[15] in a review of blood irradiation after Iodine-131 for thyrotoxicosis found 8 reported cases of leukemia, and mentioned 10 unpublished cases in his paper. All 18 patients had acute leukemia, and the interval between administration of Iodine-131 and onset of leukemic symptoms was 14 to 26 months. Among 60,000 cases of patients treated with radioactive iodine, only 18 known cases of leukemia have been reported. "Consideration of these results suggests risk of leukaemogenesis is slight, and does not contraindicate radioactive iodine therapy of thyrotoxicosis." Asper and Rall[16] commented that, "In the average patient receiving large doses of radioactive Iodine-131 and followed for 10 years, the chance of getting leukemia is about 0.5%." This percentage rate for leukemia was found in patients treated for carcinoma of the thyroid with large doses of radioactive iodine, and would not apply to the relatively minute doses given for the treatment of thyrotoxicosis. It would appear, therefore, that the remote possibility of leukemia being induced following therapy for thyrotoxicosis does not play a significant role in the decision to use radioactive iodine as a therapeutic agent when given under certain established limitations. Indications for radioactive iodine vary from clinic to clinic,

but I would suggest the following indications as representing the conservative approach to the radioactive therapy in hyperthyroidism. Radioactive iodine is the therapy of choice in patients greater than 40 years of age with diffuse toxic goitre. Some clinics are actually treating patients of all ages, but for clinicians in the general practice of medicine away from teaching centers, it is strongly advised that the age limit stated above be adhered to until all of the facts are in regarding potential toxic effects from this form of therapy. Most authorities also agree that in recurrent postoperative thyrotoxicosis, regardless of age, Iodine-131 is the treatment of choice. This is thought to be true even in young individuals following a previous subtotal thyroidectomy, since the dose of radioactive iodine required to produce normal thyroid function is small, usually in the range of 3 to 5 millicuries. Patients with hyperthyroidism in whom other complicating diseases such as heart disease, renal disease, or pulmonary problems, prevent the surgical approach to the disease, are certainly best treated with radioactive iodine. Nodular toxic goitres are generally considered a surgical disease, though older patients with nodular toxic glands are often treated with radioactive iodine, since they are also often plagued by many other medical problems. Blomfield,[17] in England, stated that treatment of nodular toxic glands with radioactive iodine was as satisfactory as in other hyperthyroid groups. It is known, however, that these cases are slower to respond, take larger doses, and the recurrence rate is higher. It is for these reasons, as well as the remote possibility that these glands may harbor thyroid carcinoma, that surgical therapy is strongly recommended.

Dosage of radioactive iodine is determined more by "an educated guess" than by the use of complicated mathematical formulas. In general terms, a dose of 3 to 8 millicuries is an average dose for diffuse toxic goitre. Clinical appraisal of the gland's size and an understanding of the severity of the thyrotoxicosis, plays the most important role in deciding on the dosage. Treatment is usually not repeated more frequently than every 3 months. Even then, cautious reappraisal is indicated. If the patient is clinically improved, as shown by a decrease in pulse and an increase in weight and a sense of well-being, in spite of continued hyperthyroidism by standard laboratory studies, a further delay in the second dose is usually justified. Many of these patients will not require further therapy. Approximately two-thirds of all hyperthyroid patients with diffuse glands, will be made euthyroid with the first dose.

The only significant complication in adults to radioactive iodine therapy at this time is hypothyroidism. Variation in the incidence of myxedema following radioactive iodine has been reported from 3 to 25%, with an average figure of approximately 10%.[4] This complication usually becomes apparent in the first 6 to 12 months, but may be delayed for years. It is therefore imperative that periodic evaluation of treated patients be done. Patients should be informed of the symptoms of hypothyroidism at the time of the original treatment, so the insidious development of hypothyroidism will not occur. Muscle cramping, especially in the region of the shoulder girdle and legs has been shown to be a prominent symptom of radioactive iodine-induced myxedema. Radioactive iodine is an excellent additional tool for the treatment of hyperthyroidism when used by a clinician experienced in its application.

Summary

Treatment of hyperthyroidism has been reviewed. A careful evaluation of each case of hyperthyroidism is imperative before embarking upon a specific course of therapy. Medical or surgical therapy when selected and used properly, produces an excellent clinical response in a high percentage of cases.

References

1. Chapman, E. M.: Current Concepts in Therapy; the Treatment of Hyperthyroidism, New England J. Med. 265:744, 844, 948, 1961.

2. von Basedow, C. A.: Exophthalmos durch hypertrophie des zelle webes in der augen hoehle, Wschr. ges. heilk. 6:197, 1840.

3. Plummer, H. S.: Results of Administering Iodine to Patients Having Exophthalmic Goiter, J.A.M.A. 80:1955, 1923.

4. Williams, R. H.: Textbook of Endocrinology. Philadelphia, W. B. Saunders & Co. 1962. p. 173.

5. Volpe, R. and Johnston, M. W.: The Effect of Small Doses of Stable Iodine in Patients With Hyperthyroidism, Ann. Int. Med. 56:577, 1962.

6. Astwood, E. B.: Treatment of Hyperthyroidism With Thiourea and Thiouracil, J.A.M.A. 122: 78, 1943.

7. McClintock, J. C. et al.: Antithyroid Drugs in the Treatment of Hyperthyroidism, Surg. Gynec. & Obst. 112:653, 1961.

8. Asper, S. P., Jr.: The Treatment of Hyperthyroidism, Arch. Int. Med. 106:878, 1960.

9. Stolfi, J. E.: Treatment of Hyperthyroidism, New York J. Med. 61:579, 1961.

10. Van der Laan, W. P. and Storrie, V. M.: A Survey of Factors Controlling Thyroid Function, With Especial Reference to Newer Views on Antithyroid Substances, Pharmacol. Rev. 7:301, 1955.

11. Krevans, J. R., Asper, S. P., Jr., et al.: Fatal Aplastic Anemia Following Use of Potassium Perchlorate in Thyrotoxicosis, J.A.M.A. 181:162, 1962.

12. Cassidy, C. E.: The Treatment of Hyperthyroidism, M. Clin. North America 46:1201, 1962.

13. Sheline, G. E. et al.: Thyroid Nodules Occurring Late After Treatment of Thyrotoxicosis with Radioiodine, J. Clin. Endocrinol. 22:8, 1962.

14. Duffy, B. J., Jr.: Can Radiation Cause Thyroid Cancer? J. Clin. Endocrinol. 17:1383, 1957.

15. Green, M. et al.: Blood Radiation Dose After 131-I Therapy of Thyrotoxicosis. Calculations with Reference to Leukemia, Brit. M. J. 2:210, 1961.

16. Asper, S. P., Jr. and Rall, J. E.: Therapeutic Uses of Radioiodine, Maryland M. J. 10:126, 1961.

17. Blomfield, G. W. et al.: Treatment of Thyrotoxicosis with I^{131}: A Review of 500 Cases, Brit. M. J. 1:63, 1959.

An Implantable, Synchronous Pacemaker for the Long-term Correction of Complete Heart Block: Nathan, David A., Center, Sol, Wu, Chang-You, and Keller, Walter, Circulation 27:682, 1963.

A cardiac pacemaker has been developed which synchronizes the electrical events of the atrium with that of the ventricle for the correction of complete heart block. This pacer picks up the negative portion of the P wave at the atrial pickup electrode which is sutured to the atrial epicardial surface. After receipt of the P wave and its amplification, a time delay is introduced approximately equal to that of the normal P-R interval. Ventricular depolarization is then initiated by conducting the output pulse to a lead which has been sutured to the ventricular surface. This restores the ventricular rate to the natural rate of the sinoatrial node as determined by body demands. Several additional safety factors have been introduced. If the atrial impulse should become weak or drop below a rate of 60 per minute, the pacemaker automatically will pace the ventricle at a constant rate of 60 per minute. If the atrial rate exceeds 150 per minute a 2:1 block is introduced giving a ventricular rate of 75 per minute. This 2:1 block persists up to an atrial rate of 300 at which time a 3:1 block is introduced giving a ventricular rate of 100. To prevent rapid shifts of rate the "cut-in" and "cut-out" rates are set apart 20 beats per minute. For example, at an atrial rate of 150 per minute the 2:1 block is introduced giving a ventricular rate of 75 per minute. As the atrial rate slows the block persists to an atrial rate of 130 when it reverts to a 1:1 ratio. Thereafter it will not block again until a rate of 150 is reached.

The epoxy resin coated pacemaker weighs five ounces. The battery life is estimated at three to five years. The pacemaker is implanted in an accessable subcutaneous pocket in the anterior abdominal wall with the atrial and ventricular electrodes entering the chest through the intercostal incision necessary for attachment of the leads.

This pacemaker has the obvious advantage of pacing the ventricle at rates responding to change in bodily needs and exercise. It is particularly suitable to those patients with intermittent heart block and intervals of normal sinus rhythm when a fixed rate pacemaker would produce out of phase competitive ventricular beats. (Abstracted for the Middle Tennessee Heart Association by William Shannon Stoney, M.D., Nashville.)

CLINICOPATHOLOGIC CONFERENCE

City of Memphis Hospitals

Sensory Radicular Neuropathy

Clinical Summary. T. W., a 34 year old Negro was first admitted to the City of Memphis Hospitals on April 27, 1954 at the age of 24 because of a "sore" on the sole of the left foot. This lesion had begun approximately 6 months before as a small blister which had gradually increased in size. Some 6 weeks prior to admission the entire foot became swollen and tender, with extension of the tenderness to the midthigh. Four weeks prior to admission the lesion on the left foot spontaneously ruptured and drained purulent material. He was seen in the out-patient clinic on several occasions prior to hospitalization, but the draining continued until the time of admission.

On April 19, 1954 the lesion on the ball of the left foot measured approximately 2 by 1 by 1 cm. X-ray studies on that date revealed no evidence of disease of bones or joints in either leg or foot. Cultures on that date grew out a hemolytic *Staph. aureus*, coagulase positive, and Diphtheroids. A VDRL. test on March 12, was reported as negative. On physical examination during this first hospitalization (April, 1954) his blood pressure was recorded as "physiological." The ulcer was on the plantar surface of the left foot, near the midline, and just proximal to the second metatarsophalangeal joint. The deep tendon reflexes could not be elicited in the legs. A second STS. was again nonreactive. The PCV. was 41%.

While in the hospital the patient was treated with saline soaks to the foot, and the ulcer became free of infection but did not heal. The patient was discharged home to be followed in the clinics.

There were 7 additional hospital admissions between 1954 and 1960 for chronic ulcerations on both feet, which responded very poorly to reconstructive surgery, and for complications of the ulcers, i.e., osteomyelitis, which necessitated amputation of the left lower extremity. During these hospitalizations (Sept. 4 to Oct. 27, 1954, July 25 to Aug. 22, 1956, Jan. 1 to 23, 1957, Aug. 7 to 20, 1957, June 6 to Sept. 18, 1958, Oct. 9 to Nov. 15, 1958, and Apr. 16 to 17, 1960) multiple serologic tests for syphilis upon both blood and spinal fluid were negative. No well defined neurologic abnormalities could be elicited except for hyporeflexia to absent reflexes in the lower extremities.

The patient was readmitted to the hospital for the 9th time on Nov. 5, 1960, at the age of 31. At that time there was swelling, pain, and obvious infection in the right thumb and hand of several weeks duration, for which the patient had been sent in the out-patient surgical clinics. The patient related that approximately one month prior to admission he began having "blisters" on his fingers and lateral and palmar surfaces of his hands which would spontaneously burst and result in sores, some of which had healed spontaneously and some had persisted until the time of admission. On the day of admission the right thumb was explored and sequestra of bone were found in the distal phalanx of the thumb. These were removed and submitted for microscopic examination (S60-7597); the diagnosis was acute osteomyelitis, and from which a beta hemolytic, coagulase positive Staphylococcus was cultured.

At the time of admission the patient complained of tingling sensations in his right hand and foot, impotence of approximately one year's duration, some difficulty or change in his speech, and a feeling of unsteadiness upon closing his eyes. The major pertinent physical findings were limited to the neurologic examination, in which all cranial nerves were found to be intact. He was well oriented, alert and responded to questions. No evidence of motor weakness could be found. The deep tendon reflexes were absent. There was decreased sensation to pin-prick and light touch in the right foot, which appeared to have a stocking-and-glove distribution rather than to follow any specific dermatome. There was loss of position sense. He was unable to stand on his one remaining leg. No pathologic reflexes were present. Routine laboratory studies on admission revealed the urine to be negative for glucose and protein, the PCV. to be 41%, and a normal WBC. count and differential count. A lumbar puncture revealed an opening pressure of 180 mm. of water; no cells, a protein of 32 mg., and sugar of 65 mg. per 100 ml. were reported in the spinal fluid. The serologic test for syphilis was nonreactive. On the 16th hospital day a Schilling test was carried out with an oral dose of 0.53 microcuries of radioactive vitamin B_{12}. The urinary excretion of this isotopic B_{12} was 19.2%. BUN. was 18 mg. per 100 ml. and potassium 5.2 mEq/L. X-ray examination of the spine and a myelogram were done and revealed no abnormalities. The patient was discharged on Dec. 8, with improvement of the ulcers on the right thumb and palmar surface of the hand. He continued to have neurologic findings of loss of pain and temperature sensation in the upper extremities and the right lower extremity. He was discharged with the tentative diagnosis of spinal cord disease, type unknown, possible syringomyelia.

The patient was readmitted for the 10th time on Nov. 28, 1961 because of pain and swelling of the third finger of the right hand. His physical findings on this admission were a B.P. of 160/110, cellulitis of the right hand, with ulceration and marked enlargement of the right middle finger,

From the Departments of Neurology, Radiology, and Pathology, University of Tennessee, College of Medicine, and the City of Memphis Hospitals, Memphis, Tenn.

and no new neurologic findings. A hemolytic Staphylococcus was cultured from the right middle finger. An x-ray film of the hand on the 29th revealed no evidence of osteomyelitis. On Nov. 28, at incision and drainage of the right finger, severe cellulitis and tenosynovitis with gangrene of the tendon were noted grossly. The microscopic report was of "acute tendon abscesses." Two days later, the finger was again incised and drained. The patient improved satisfactorily while in the hospital and was discharged on Dec. 7.

He was readmitted to the hospital on Aug. 31, 1962 following a fall and fracture of the right leg. At that time it was noted that he was a very poor historian, and was thought to be rather severely mentally retarded. On Sept. 1, a closed reduction of the fracture of the right tibia was done. He did satisfactorily while in the hospital and was discharged on Sept. 5.

He was admitted for the 12th time on Oct. 5, 1962 because of progression in his peripheral sensory loss. It was noted on this admission that his speech had grown progressively worse, with the primary difficulty being in articulation rather than in understanding. The blood sugar was 148 mg. which, when repeated 3 days later was 64 mg. per 100 ml. A staff neurologic note is given as follows, "This patient has signs of cerebellar disease (intention tremor, dysmetria, and peripheral neuropathy. There is surprisingly little evidence of motor involvement (? lost DTR's on basis of no afferent limb reflex?). Strength is good; tone is approximately normal." On Oct. 12 an electromyogram revealed no evidence of denervation or evidence of a nerve conduction defect. Nasal smears for acid-fast bacilli (leprosy) were reported as negative. The patient was discharged on Oct. 17, again with no specific diagnosis of his nervous system disease. It was considered at this time that he had diabetes mellitus.

The 13th and last hospitalization was on July 24, 1963 for re-evaluation of his neurologic disorder. It was again noted that there was absolutely no family history of a similar neurologic disease. The important physical findings were again confined to the nervous system, and more specifically to the cerebellar and peripheral sensory elements. There was decreased sensation in the ventral surface of the body from the level C-5 down, with the greatest decrease in the right hand and right leg below the knee. There was no evidence of motor weakness. There were atrophic changes in both hands, more marked on the right than on the left. There was some truncal and extremity ataxia, most marked in the upper extremities. Evidences of so-called "cerebellar speech" were found.

At no time during this hospital admission, or in the 12 previous admissions, had sugar been detected in the urine. The levels of blood sugar were within physiologic ranges on this admission, the highest level being 136 mg. per 100 ml. Skull x-rays and carotid arteriograms revealed a right frontal intra-osseous calvarial lesion, which protruded into the intracranial cavity for some 2 cm. There was a faint line of sclerosis about this area on its medial aspect. This was considered to be a benign neoplasm of the skull, with a dermoid cyst the most likely possibility. The arteriograms revealed no abnormalities of the intracranial vessels except many small vessels leading to the skull lesion from the external carotid artery. On the basis of the arteriograms, the skull lesion was diagnosed as a hemangioma of the calvarium. An EKG. on July 30 was interpreted as within normal limits. A nerve and muscle biopsy on August 8 was interpreted as showing no pathologic changes. Deficit of the eighth nerve was noted for the first time on this admission, but detailed testing was not done. A second electromyogram on Aug. 3 was abnormal, with mild to moderate conduction slowing of the motor fibers of the right peroneal and tibial nerves, with low amplitude responses; denervation in the right anterior tibial and right extensior digitorium brevis muscle with a reduction in the number of motor unit potentials; and normal nerve conduction in the right median nerve, but no sensory response.

The patient died on Aug. 18, 1963 after apparently vomiting and aspirating the vomitus.

Clinical Discussion

DR. RICHARD DALY (Neurology): My remarks will emphasize mainly some of the unusual clinical features of this case, and I will try to indicate what I would consider to be a reasonable clinical approach to such a problem.

The first thing to be noted is that we are presented with the history of an illness which seems to be all of one sort. It extends over a period of approximately 10 years, is unremitting, but quite slow in its progression.

Secondly, when this patient first presented himself to the clinician there was little to indicate definite involvement of the nervous system by a disease process. This was true until 1960, when neurologic examination for first time revealed unequivocal positive findings. In this regard it is worth noting that the complaint of pain with the initial ulcers on both the feet and hands is not characteristic of many of the diseases of the nervous system characterized by the development of ulcers on the extremities. However, by 1960 he did have positive findings on neurologic examination, all of which, with the exception of the complaint of impotence, could be interpreted as implicating the sensory component of the pe-

ripheral nervous system. I think we must interpret the diagnosis of a spinal cord disease made at that time as being based primarily on the presence of the ulcers and osteomyelitis, and the complaint of impotence. It should be noted that 6 years had elapsed from the appearance of the first ulcer, and it was still impossible to make a definitive diagnosis. Although more elaborate studies may have been indicated at that time, it appears in retrospect that they probably would not have been helpful.

There was no further notice of additional neurologic deficit until 1962, when it became apparent that there was involvement of his cerebellum, as demonstrated by his speech and abnormalities in the upper extremities. Although there had been progression of his sensory loss, there was no more specific information regarding this. The clinical impression of a lack of motor weakness was confirmed by EMG. and nerve conduction studies.

In 1963, for the first time, there was evidence of involvement of the motor system, with atrophy of the hands and evidence of denervation of several muscles investigated by electromyography. It should be noted that a muscle biopsy failed to confirm these impressions. Perhaps the most fascinating finding at that time was the marked loss of hearing. Perhaps this deficit had been present in the past, and that difficulties in communication secondary to this deficit had led to the erroneous impression of a mental deficit.

In very brief summary, therefore, it may be said that we are presented with a history of a ten year illness in a young negro man, slowly progressive, unremitting, characterized initially by the development of painful ulcers and osteomyelitis in the lower extremities, followed much later by the development of similar disturbances in the upper extremities and only in the middle of the course, so to speak, by definite evidence of progressive involvement of the nervous system.

In terms of localization of the lesion or lesions within the nervous system, what inferences can be drawn? First, I think the point should be made that although the most dramatic disturbances for a long time were confined to the distal parts of his extremities, there was at no time sufficient evidence to indicate that the peripheral nerves without question were involved. Although a stocking and glove type of hypalgesia is strongly suggestive of peripheral nerve damage, such a distribution of sensory loss may also be due to spinal cord involvement. Secondly, the bilateral cerebellar signs in the upper extremities are probably due to bilateral involvement of the cerebellar hemispheres. Such findings could conceivably have been due to bilateral disease of the frontal lobes, but we have no clear evidence of other signs of frontal lobe dysfunction. Cerebellar signs are rarely, if ever, due to lesions in the spinal cord. Thirdly, late in the course of the illness there was a suggestion of involvement of the anterior horn cells, in that atrophy of the hands was noted and there was signs of denervation on the EMG; however, these findings do not correlate with the normal muscle biopsy, and leave us dangling. Fourthly, let us assume for the sake of discussion, that there was involvement of the eighth nerve, although admittedly the clinical evidence for this is meager. Lastly, it is noteworthy that many structures were clinically spared. Particularly, there are no descriptions which would suggest involvement of the posterior columns. Is it possible that for a long period of time there was a diminished appreciation of deep pain. Even if this were the case, it would not be a great benefit in trying to explain the development of all the ulcers. Although the ulcers strongly suggest autonomic dysfunction, no supportive evidence is offered. In view of these considerations as to localization, I think it will be agreed that this patient did not suffer from any of the common types of peripheral neuritis.

We should now consider those processes which may masquerade as a polyneuropathy, at least for a time during their course. One of these is syringomyelia, a diagnosis which had been considered in this case. There are many features of the patient under discussion which help rule out this possibility. It is not very common for the sensory disturbance to begin in the lower extremities. There is usually a clear history of the onset of sensory disturbance

preceding the appearance of ulcers. One would expect atrophy and signs of denervation of the musculature to appear much earlier than they did. Pyramidal tract signs in the lower extremities are common, while involvement of the cerebellum and eighth nerve are not usually encountered with obvious multiple cranial nerve palsies, as is syringiobulbia.

Tabes dorsalis merits brief consideration. Trophic ulcers are common in this disorder, but they are typically painless. The sensory loss for pain is often in a patchy distribution, sometimes referred to as Hitzig's disease areas. Bony changes are more commonly located at the larger joints and are not usually complicated by osteomyelitis. In this patient there were no lightning pains, girdle pains, gastric crises, bladder disturbances or pupillary changes, all of which occur frequently in tabes. All of these points plus the negative serologic tests are against the diagnosis of tabes.

The hypertrophic interstitial neuritis of Dejerine and Sottas or of Refsum might be considered. Frequently the peripheral nerves are palpably enlarged, but such is not always the case. A prolonged course is the rule, but motor involvement is a prominent feature, with atrophy and weakness of the musculature. Many other abnormalities have been found associated with the peripheral nerve disturbance. Nerve deafness is one of these. Many other features, such as night blindness, constriction of the visual fields, epiphyseal changes in the long bones, cardiac conduction defects, and changes in the cerebrospinal fluid are characteristic of this disorder, and were not present in this patient.

Within recent years there have been several reports dealing with an unusual disease of the nervous system first described by Hicks in 1922. The pathology was investigated much later by Denny-Brown, who refers to it as hereditary sensory radicular neuropathy. This disease is characterized by an onset within the first two or three decades of life, and by the formation of ulcers, sequestration of bone and bony deformities together with a dissociated type of sensory loss, beginning in the distal lower extremities. For this reason it was probably erroneously diagnosed as "lumbar syringomyelia" in the past. Other investigators have described clinical signs indicative of involvement of the posterior columns, cerebellum, and both portions of the eighth nerve. I think the peculiar features of this case, which I have tried to emphasize, fit best with this diagnosis.

It's worth pointing out, although it is not mentioned in the protocol again, that this patient did not die as a result of the disease under discussion at this time. This patient had a cerbrovascular accident a short time after arteriography, aspirated vomitus and died from pneumonia. He probably would not have aspirated had it not been for the fact that he had had a stroke.

DR. RUNYAN: Do you think that diabetes mellitus could be the cause of this syndrome? He was diagnosed as a diabetic in October, 1962.

DR. DALY (Neurology): I do not think the patient had diabetes. I do not think there is any evidence to support this diagnosis, and think that diabetic neuropathy, which had gone on for a period of 10 years in such an unremitting manner, would have been characterized by this time by conspicuous muscle weakness. The patient also never suffered from the type of sensory complaints which would be more common in diabetic neuropathy. The eighth nerve involvement this patient had would be quite rare in diabetes, and the involvement of the cerebellum very rare indeed. The trophic ulcers on the feet and hands are not usual in diabetics, although a patient with diabetes may well develop osteomyelitis. Another point which I should emphasize is that the patient was only 24 years of age when his complaint began, and anyone in this age group with diabetes would certainly have had some features of diabetic neuropathy.

DR. COLBY GARDNER (Radiology): In the right frontal area we have a lesion which is characterized by a zone of sclerosis and rarifaction. In the lytic portions of this lesion are multiple spicules of bone. This lesion is an expanding one involving primarily the inner table of the skull. It extends into the cranial cavity for about 1 cm. There is no involvement of the outer table, and I would say that it involved the outer one-half of the diploe. It has multiple

bone spicules or radiations of bone within it, and is rather classically a hemangioma of the calvarium. The remainder of the x-ray films are not revealing. The heart is within normal limits of size and contour.

DR. WILLIAM F. McCORMICK (Pathology): As Dr. Daly has pointed out, this is an unusual and difficult problem,—for the neuropathologist as well as for the clinical neurologist. For this reason I will try to develop the resolution of the problem at some length.

The patient was without his left leg, due to the prior amputation. The distal phalanges of both thumbs were absent, and small ulcers were present on the pads of the middle and ring fingers of the right hand. There was atrophy of the intrinsic muscles of the hands, more marked on the left than on the right. No other important natural or iatrogenic external lesions were noted.

The pertinent gross internal findings were those of bilateral bronchopneumonia; prominent chronic passive congestion of the liver; double renal pelves and incomplete double ureters on both sides, with partial obstruction due to kinking of the ureters from the superior renal pelves and moderate hydronephrosis of the superior pelves; acute hemorrhage cystitis; and a 2.5 by 3.0 by 1.5 cm., rounded, bony growth in the right frontal bone which projected into the anterior cranial fossa for 0.5 cm. This latter lesion was the hemangioma diagnosed radiographically. The heart was not remarkable, and there were no stigmas of syphilis. Postmortem hemoglobin electrophoresis done in my laboratory revealed sickle cell trait. The major findings of interest however, were in the central nervous system.

The brain weighed 1225 grams. There was softening (infarction) of the left inferior frontal and insular gyri with almost total thrombotic occlusion of the left middle cerebral artery near its origin. The pons and medulla were of normal size, but were slightly more firm to palpation than is usual. The cerebellum was grossly not remarkable. There was a glistening, almost chalky-white discoloration of the (dorsal) posterior funiculi of the spinal cord, maximal in the cervical and thoracic regions. The central canal was not patent and no syrinx was present. The cord was not reduced in size, and the roots of the cauda equina appeared normal.

On microscopic examination of the central nervous system the recent thrombosis of the left middle cerebral artery and the acute encephalomalacia of the left cerebrum were confirmed. The additional findings of importance can be tabulated as follows:

(1) diffuse, mild to moderate neuronal loss from the cerebral cortex;

(2) moderate to marked Purkinje cell loss from the cerebellum with prominent Bergmann's glia and a mild, focal loss of granular cells, and preservation of neurons in the cerebellar mid-line nuclei (dentate, emboliform and globose);

(3) fibrous ependymal granulations in the fourth ventricle;

(4) normal preservation of neurons in the vestibular nuclei and good myelination of the major descending fiber pathways and of the cerebellar peduncles;

(5) moderate reduction in the neurons of the inferior olives with gliosis (Fig. 1);



FIG. 1. Section of medulla illustrating atrophy and gliosis of inferior olivary nuclei. (P.T.A.H. stain.)

(6) pallor and hypomyelination of the fibers of the fasciculus gracilis and cuneatus and equivical reduction in the neurons of the gracitis and cuneate nuclei in the cordal medulla;

(7) marked demyelinization (Fig. 2) and gliosis of the posterior white funiculus of the spinal cord at all levels (Figs. 3 and 4); and

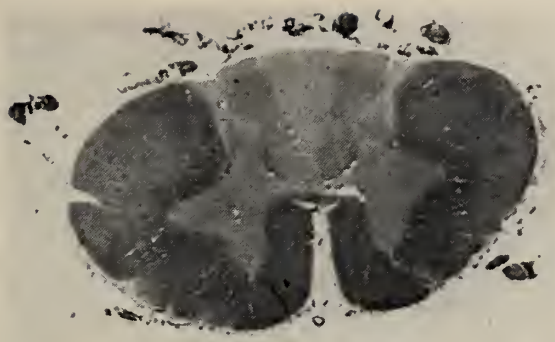


FIG. 2. Demyelinization of posterior columns of thoracic spinal cord. (Luxol-fast blue-P.A.S.H. stain.)

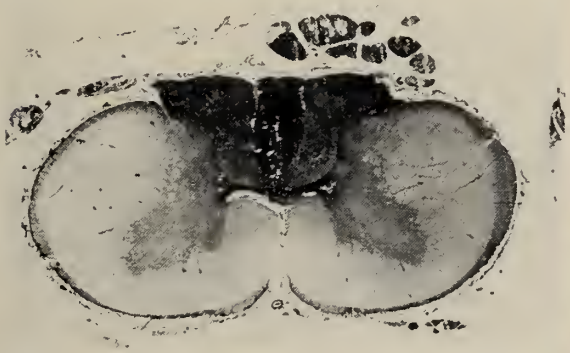


FIG. 3. Intense gliosis of posterior columns of cervical spinal cord. (Holtzer stain.)



FIG. 4. Severe piloid gliosis of posterior columns. (P.T.A.H. stain.)

(8) neuronal preservation in the anterior and posterior gray columns of the spinal cord.

I shall now attempt to synthesize these findings into a specific diagnosis and mention certain other somewhat similar disorders. Before doing so I should mention briefly the hemangioma found in the skull.

Hemangiomas of bone are relatively uncommon in any location, but are by far more common in the vertebrae than elsewhere. Hemangiomas of the skull are quite rare. It is estimated that only about 2.5% of all bone neoplasm occur in the skull, with several types being more common than angiomas. The angiomas of the skull usually occur in the parietal and frontal bones and most often expand the outer table, producing a quite characteristic x-ray appearance. In this case the angioma expanded in the inner table of the right frontal bone. (Fig. 5a.) Microscopically,

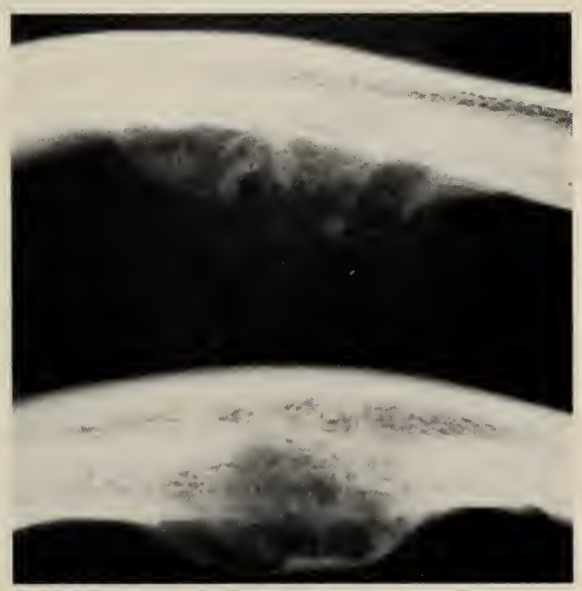


FIG. 5a. Hemangioma of skull.

this lesion is seen to be a capillary hemangioma (Fig. 5b). It is incidental to the major problem in this patient.

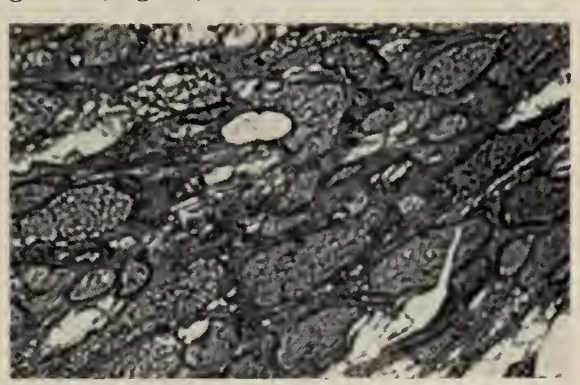


FIG. 5b. Photomicrograph of hemangioma of skull showing the capillary nature of the lesion.

Primarily, we are dealing with a patient with posterior column demyelinization. While most physicians immediately think of syphilitic tabes dorsalis, there are a number of diseases which can, at least on occasion, produce essentially "pure" posterior funiculus demyelinization (Table 1). Several of these 8 entities can be immediately discarded on clinical and/or anatomic grounds. One of these, tabes dorsalis, will be briefly discussed because of its relative

Table 1

DISORDERS REPORTED AS HAVING PRODUCED "PURE" POSTERIOR COLUMN DEMYELINATION*

1. Tabes dorsalis (syphilis)
2. Guillain-Barré Syndrome
3. Hypertrophic Interstitial Neuropathy (Dejerine-Sottas; Refsum)
4. Whipple's Disease
5. Hereditary Sensory Radicular Neuropathy (Hicks and Denny-Brown)
6. Biemond's Posterior Column Ataxia
7. Hereditary Spastic Ataxia
8. Postinjection Adhesive Arachnoiditis

*The majority of these diseases do not usually present themselves with "pure" posterior column demyelinization, but all have been reported as doing so.

frequency. Infectious neuronitis (Guillain-Barre), hypertrophic interstitial neuropathy, Whipple's disease (intestinal) lipodystrophy, and postinjection adhesive arachnoiditis can also be discounted. However, as Refsum's syndrome was strongly considered clinically, it too will be discussed. Tables 2 and 3 summarize some of the more important clinical and anatomic features of the four most important diseases to be considered, and compares them with this patient. As you can readily see, and as Dr. Daly has mentioned, most do not fit with our case. Only the syndrome of Hicks and Denny-Brown, probably better called "hereditary sensory radicular neuropathy," needs real consideration. In this patient there was no family history, but sporadic cases do occur. The real problem lies in the fact that we have no dorsal root ganglia to examine in our case. Everything else, clinical and anatomic, is compatible, and this disorder may well be what our patient has.

There is a very rare form of ataxia, usually considered as belonging to the Friedreich's group, known as Biemond's posterior column ataxia. This disorder was first described in 6 members of a European family by Biemond in 1951. To my knowledge, only one case has come to autopsy, and that patient had severe degeneration of the dorsal columns throughout their length together with the larger fibers of the dorsal roots, and Purkinje cell loss from the cerebellum. No other pathologic findings have been reported to my knowledge. The heart, which is so characteristically abnormal in Friedreich's ataxia, was normal in our patient. I do not know whether or not the heart is involved in Biemond's ataxia. As our patient had all three of these findings, it is quite possible that he has this disorder. I know of no way we can differentiate between these last two possibilities (i.e., hereditary sensory radicular neuropathy and Biemond's spinal ataxia) in the absence of material from the dorsal root ganglia. All of the neurologic syndromes of which I am familiar, only hereditary sensory radicular neuropathy or Biemond's posterior column ataxia fit the known findings of this case. Almost purely on the basis of reported frequency, I would tend to classify this as a case of the Hicks; Denny-Brown syndrome.

DR. DALY (Neurology): I think that these amyloid-like deposits have been also described around some of the roots of the cauda equina, which I believe would support the notion that the dorsal root ganglia deposits are probably not a change which is secondary to osteomyelitis.

Table 2

Disease	*Serologic Test for Syphilis*	*Familial*	*Major Clinical Features*
Tabes dorsalis	Positive (80-90% of cases)	No	Progressive ataxia; loss of DTR's; lancinating pains; pupillary abnormalities (Argyll, Robertson, etc.); impaired sensation.
Refsum's Syndrome	Negative	Yes	Ataxia; muscle atrophy; retinitis pigmentusa; deafness; night blindness; epiphyseal dysplasia of elbows, shoulders and knees.
Hicks; Denny-Brown Syndrome (Hereditary Sensory Radicular Neuropathy)	Negative	Yes	Onset in 3rd-4th decade; deafness in some families; ulcers on feet usually first sign; loss of sensibility to pain and temperature; DTR's lost in legs.
Friedreich's Ataxia	Negative	Yes (Numerous sporadic cases)	Ataxia of gait; pes cavus; dysarthria; nystagmus; DTR's lost in legs; kyphosis; progressive course.
This Case	Negative (Multiple-blood and spinal fluid)	No	Ataxia; loss of hearing; ulcers on hands and feet; loss of DTR's in legs; dysarthria; decreased sensation with good motor preservation; abnormal E.M.G.

Table 3

Disease	*Major Anatomic Abnormalities*
Tabes dorsalis	Demyelination of dorsal roots. Demyelination of posterior white funiculi, with middle root zone affected early and most severely. *Perivascular chronic inflammatory cell infiltrates.
Refsum's Syndrome	*Fat-filled macrophages in leptomeninges, choroid plexuses, and globus pallidus. Neuronal loss from inferior olives. Ependymal granulations in fourth ventricle. *Interstitial hypertrophic polyneuropathy.
Hicks; Denny-Brown Syndrome	Loss of neurons in Scarpa's ganglion and spiral ganglion. Loss of neurons and hyaline material deposition in dorsal root ganglia. Purkinje cell loss from cerebellum and neuronal loss from inferior olives. Demyelination of dorsal roots and posterior white funiculi with posterior root zone affected early and most severely.
Friedreich's Ataxia	*Spinal cord is almost always quite shrunken. *Loss of neurons from superior olives and dentate nuclei. *Loss of neurons from many cranial nerve nuclei, especially V, VIII, IX, X, and XII. *Loss of neurons from Clarke's column with gliosis. *Demyelination of lateral white funiculi. *Demyelination of posterior white funiculi, with middle root zone affected early.
This Case	Neuronal loss from inferior olives. Ependymal granulations in fourth ventricle. Purkinje cell loss from cerebellum. Demyelination of dorsal roots and posterior white funiculi.

*Indicates a finding absent in this patient.

One thing which should be emphasized is that I believe there is no good explanation why these people develop these serious bone changes. Why should trophic ulcers often leave, as in this particular patient, so many areas of osteomyelitis? I think there is very little known about why these changes occur.

Question: Was there any evidence of any primary vascular disease to account for the cerbral thrombosis?

DR. McCORMICK (Pathology): The peripheral vascular system was fairly well examined, I believe. There was no evidence of any disease such as thromboangitis obliterans, allergic arteritis, polyarteritis nodosa, or anything of this nature. I had mentioned that the patient did have sickle cell trait. All too often we find things in these patients which are very difficult to explain, but that we are somewhat reluctant to say is due to the sickle cell trait. The heart, as I had also mentioned in my discussion, was normal and this is important, I think, primarily because in the Friedreich's ataxia groups of disease the heart is so commonly abnormal,—anatomically with what has been called "chronic interstitial myocarditis." People with this disorder almost always have electrocardiographic abnormalities, which this man did not have, together with certain other clinical features. He certainly has no evidence of heart disease. There was significant cerebral atherosclerosis—much more than is usual in a man of this age. This, together with sickle cell trait, was the probable cause of the thrombosis.

Final Pathologic Diagnosis:

Demyelination of posterior columns of spinal cord and dorsal nerve roots; loss of Purkinje cells and olivary neurons with gliosis. (Probably Hicks; Denny-Brown Syndrome).

The New President



R. H. KAMPMEIER, M.D.

NASHVILLE

R. H. Kampmeier, M. D.

76th President, Tennessee Medical Association

SERVICE and activity—characterize the more than two score years the new president of the Tennessee Medical Association has spent in the practice of medicine.

However in addition this dedicated physician is a teacher, editor, author, executive, and leader in civic and medical affairs. While giving students, colleagues, patients and fellow citizens the benefit of his scientific knowledge and professional experience, his inquiring mind constantly seeks to add to its already voluminous store of technical and practical information.

Born in Iowa January 15, 1898, he received his A.B. and M.D. degrees from the State University of Iowa, the latter in 1923, earning AOA and Sigma Xi memberships in medical school. After interning at St. Mark's Hospital in Salt Lake City he entered general practice in a coal mining camp at Castle Gate, Utah. Following specialty training in medicine at the University of Michigan Medical School, he entered group practice in Pueblo, Colorado, in 1930. He joined the LSU School of Medicine as assistant professor and visiting physician to Charity Hospital in 1932.

Becoming assistant professor of medicine at Vanderbilt University School of Medicine in 1936, he became professor of medicine in 1953 and reached emeritus status in 1963. He was acting director of the department from 1944-46 and 1958-59, and currently is director of continuing education there.

In 1916 he enlisted in the Iowa National Guard, and was an officer candidate in the field artillery when the Armistice came. As a consultant to the Surgeon General's office in World War II, he took part in the ration field trials, and nutrition surveys in Germany after VE Day. From 1943-47 he collaborated in the experimental use of penicillin for treating syphilis, under the National Research Council.

Recognition of Dr. Kampmeier's many contributions to organized medicine is indicated by the numerous responsible positions he has held. He served the Nashville Academy of Medicine as a Board of Directors member, 1950-54, being chairman in 1952 and 1953. He was Academy president in 1951. He was TMA secretary-editor 1950-63, has been a member of its Board since 1950, and continues as TMA Journal editor. He was secretary of the AMA Section on Internal Medicine 1956-59, and its chairman in 1959. He is an emeritus member of the American Clinical and Climatological Association and the Association of American Physicians.

He will take office as Southern Medical Association president in November, having edited its Journal since 1955. A fellow of the American College of Physicians since 1928, he became Governor for Tennessee in 1954, and has been a Regent since 1961. He was president of the Nashville Society for Internal Medicine in 1948.

The esteem of his colleagues was demonstrated in 1958, when he was named Tennessee's Outstanding Physician of the Year.

In addition to some eighty scientific papers he has written two medical text books and numerous editorials.

Dr. Kampmeier was married to the former Blanche Davis in 1922. Their daughter Joan (Mrs. Fred Medwedeff) and three grandchildren live in Nashville.

(J.B.)

President's Page



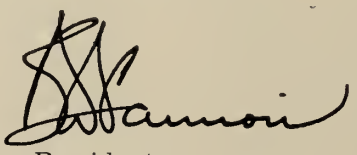
Dr. Cannon

The House of Delegates of the American Medical Association in the past year established the Gunderson Committee. This Committee is to study the structure of the AMA organization with recomendations for changes in the format. In Portland, when the Committee held hearings, your President felt it was his obligation to present an opinion representative of the thoughts of Tennessee's physicians. The essence of this presentation may be summarized as follows:

The problem the Committee faces can be divided into three spheres of consideration. One, the *quantity* which refers to a desirable number of delegates from all spheres of medicine for adequate representation. Two, the *quality* of the individual which would pertain to selections of individuals the most competent to represent their particular groups, and three, the *modus operandi* which pertains to the organizational structure of the governing body, its councils, and committees. In reference to the quantity, there has been considerable criticism that the American Medical Association does not speak for all of medicine. We have seen groups, such as the College of Surgeons and the American Association of Medical Colleges, take issue with the fact that the American Medical Association represents the thoughts of all of medicine. It would seem wise that study be given to assure all groups that the American Medical Association is still their spokesman. Adequate representation from these groups seems desirable. Certainly when delegate representation is granted smaller specialty groups acting as spokesmen for such small facets of American medicine.

Concerning quality, we find in the American Medical Association, as in other organizations, that selection of the individual brings about a contest between those of political aspiration and those of significant capabilities. The former may have too strong a desire for control. Such representation may lead to democracy without wisdom. In contrast, there are those who are desirous of developing their own potential, having ability and knowledge, who are men of integrity dedicated to participate for motives other than selfish political gain. These men are able to perform with wisdom in the best interest of medicine. Surely out of the ranks of AMA, there are more than one, or two, or even ten individuals who meet these qualifications and can persuasively express their thoughts, defending us against our adversaries. Individuals in this category are those capable of leading our organization. Perhaps it is fantasy not to believe that men always act politically in spite of what justification they may advance for their actions. Yet, at some time in the sphere of interrelationships of men, we must assume, perhaps idealistically, that there are men more dedicated to unselfish interests. Should our representation from all facets of medicine be of such capable men, then our problem resides only in the modus operandi. We need a system whereby we are sufficiently rigid to maintain the course of purpose, but flexible enough to fit the changing pattern of socio-economic forces.

Our State Association was highly complimented when Doctor Alvin J. Ingram was appointed by the Speaker of the House of Delegates as one of the seven comprising the Gunderson Committee. The recognition of our delegate, as one with integrity, dedication and wisdom, demonstrates that the leaders in the American Medical Association have confidence in his ability.



President

THE JOURNAL

OF THE
TENNESSEE MEDICAL ASSOCIATION

Published Monthly
Devoted to the Interests of the Medical Profession of Tennessee
Office of Publication, 112 Louise Avenue, Nashville 5, Tenn.

Acceptance for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized July 15, 1932.

Copyright for protection against republication. Journals of the American Medical Association and of other state medical associations may feel free to quote from this Journal whenever they desire merely giving credit to this publication.

Address papers, discussions and scientific matter to R. H. Kampmeier, M.D., Editor, B-4211 Vanderbilt University Hospital, Nashville 12, Tennessee
Address organizational matters to Jack E. Ballentine, Executive Director, 112 Louise Avenue, Nashville 5, Tenn.

R. H. KAMPMEIER, M.D., Editor
Vanderbilt University Hospital, Nashville

EDITORIAL BOARD

ADDISON B. SCOVILLE, JR., M.D.
2104 West End Ave.
Nashville 5, Tennessee

ALBERT WEINSTEIN, M.D.
Medical Arts Building
Nashville 12, Tennessee

COMMITTEE ON SCIENTIFIC WORK AND POST GRADUATE EDUCATION

R. H. KAMPMEIER, M.D., Chairman
W. POWELL HUTCHERSON, M.D., Chattanooga
ROBERT P. MCBURNEY, M.D., Memphis
EUGENE J. SPIOTTA, M.D., Memphis
(Specialty Society Representatives to be named)

APRIL, 1964

EDITORIAL

MEDICAL EDUCATION LOAN PROGRAM OF AMA-ERF

As of the end of 1963, the loan guarantee program sponsored by the AMA had loaned money to 11,875 individuals—8,430 were medical students, the remainder interns and residents. In 1962, the loans totaled 5,322 and in 1963, totaled 6,553 to a grand total principal of $13,708,800. The loans went to students in 85 medical schools, and to interns and residents in 538 hospitals in 47 states and possessions. Of the totals for the country, 785 loans went to individuals in Tennessee, to the sum of $834,300 in principal, 335 borrowers in 1962 and 422 in 1963. The majority of the loans were given to students in the University of Tennessee College of Medicine.

To the income of the loan fund, physicians and professionally-related persons or organizations contributed in 1962, $276,383 and in 1963, $418,345. The AMA, industry, foundations and other sources raised the total contributions for the two years to $1,730,000.

Already in 1963, 319 borrowers had begun to repay loans in monthly payments and 58 had paid up their loans in full. Only 5 loans had been defaulted and were purchased by AMA-ERF, 4 of these due to death.

The Guarantee Loan Fund of the AMA and its co-contributors for each of its dollars covers banks' $12.50 in loan principal and accruable interest. The AMA-ERF program is based on the individual's responsibility with a simple interest rate of 5.5% accruing during the training period, and a 6.5% simple rate on monthly unpaid balances during repayment.

With 1964 there went into effect government loans available to students in medicine, dentistry, and osteopathy—a three-year program calling for $5.1 million the first year, $10.2 million and $15.4 million for the second and third years respectively. This program permits no accrual of interest while the student is in school or for 3 years after graduation. Then the loan is to be repaid with a simple interest rate of 3%. The government program requires the schools to match each $9 of federal money with $1 of school funds, the schools administering and collecting its loans.

One wonders if there will be conflict between government loans and those set up by private enterprise—probably not, at least at the moment. The federal three year program is to provide for loans to freshmen the first year; and for freshmen plus second and third year students respectively in the other years. In 1963, AMA-ERF loans went to freshmen in only 7%, sophomores 16%, and juniors 19%; almost 60% went to seniors and house officers in training.

During 1962 and 1963, before federal monies were available, the AMA-ERF program provided loans for every qualified student, intern, or resident who applied and was in need. Under this private system of sole responsibility and accrued interest, the physician will pay back all he owes in principal and interest. It is *estimated* that the interest program of federal loans (no charge for interest for the 7-year training period) will cost the taxpayer who picks up the tab, $22,363,060 in tax dollars and lost income

from investment of these dollars in private areas.

The argument for federal subsidy of students has been that competition from other fields has impaired recruitment of medical students and that financial need should be met therefore. True, there is financial need among medical students. However, there are no vacancies in medical schools. I must agree with those who have opposed government subsidy on the grounds that *need* and *demand* must be separated—they may be difficult to differentiate one from the other. The student who *demands* thereby may get his education at a lower cost than his classmate who does not *demand!* Even more important, might *easy money* recruit medical students who are not the persons to make good doctors? The practice of medicine guarantees a good living. For one who is to live a life of responsibility, to do things he may not like,—night calls, and other unpleasant chores,—one might ask, is it good to divest him of responsibility for obtaining an education entirely on his own as one of many disciplinary restrictions in early life?

One may obtain much satisfaction and security from having worked one's own way through an education. Granted every student's education is subsidized to some extent whether in state taxes or by philanthropy, but it would seem the doctor paying back a loan with interest would prefer not to have a better "deal" than his friend elsewhere on the campus.

R. H. K.

DEATHS

Dr. Arden J. Butler, Sr., 65, Covington, died March 15th in a Ripley hospital after a long illness.

Dr. Edward A. Guynes, 83, Knoxville, died February 26th at St. Mary's Hospital.

PROGRAMS AND NEWS OF MEDICAL SOCIETIES

Chattanooga-Hamilton County Medical Society

A paper entitled, "Childhood Inguinal Hernia" was presented by Dr. Frank B. Graham at the April 7th meeting of the Chattanooga-Hamilton County Medical Society. In addition to an interesting case report by Dr. John T. Evans, the investment-retirement trust program of the Memphis-Shelby County Medical Society was outlined by representatives of the Memphis Society, Drs. Wm. T. Satterfield, Finis A. Taylor and Hubert K. Turley.

Knoxville Academy of Medicine

The March 10th meeting of the Academy was held at the U.T. Memorial Research Center and Hospital Auditorium. The program was presented by the Committee on Religion and Health and included the subjects: Worship and Sacramental Ministry, Pastoral Counseling, Crisis Ministry, Physician-Chaplain and Minister-Chaplain Relationships.

A panel presentation by Chaplains Conner, Acuff, and Van Den Blink and Dr. Warren Reed, was followed by a discussion session with Dr. Richard Sexton as moderator.

Consolidated Medical Assembly of West Tennessee

The Consolidated Medical Assembly of West Tennessee met March 3rd at the New Southern Hotel. Dr. Joseph J. Baker, state commissioner of Mental Health, addressed the group on activities of the state department and discussed the new program to deal with alcoholism.

Marshall County Medical Society

The monthly meeting of the Marshall County Medical Society was held at the Medical Arts Building in Lewisburg on February 17th. An unusual and informative program pertaining to a new anesthetic was given by Dr. Hoyte C. Harris and Dr. James Limbaugh reported on the success of the Sabin Oral Vaccine clinics held in the county.

NATIONAL NEWS

The Month in Washington
(From the Washington Office, AMA)

The federal government is requiring assurances from sponsors of pending future

Hill-Burton hospital projects that there will be no racial discrimination as to either patients or physicians.

Anthony J. Celebrezze, secretary of Health, Education and Welfare, disclosed the new policy in testimony before the House Commerce Committee during testimony on legislation that would enlarge the Hill-Burton program and extend it for five more years.

His testimony came a week after a Supreme Court decision that let stand an antisegregation order against two Greensboro, N. C., hospitals.

Following the action by the Supreme Court, Celebrezze said, "I directed that the following additional steps be taken:

"(1) That we make permanent the earlier decision to approve no new applications under the 'separate but equal' provision of the (Hill-Burton) law;

"(2) That we require a nondiscrimination assurance in admittance from those pending projects previously approved on a 'separate but equal' basis;

"(3) That we seek from all pending projects an assurance that there will be no discrimination on the basis of race, creed, or color in granting staff privileges; and

"(4) That the application forms to be used hereafter be amended to require of all applicants whose application has not been finally approved, a nondiscrimination assurance covering staff privileges and admissions, and that all portions and services of the facilities be made available without discrimination on account of race, creed or color."

Celebrezze also said that consideration was being given to calling a meeting of the leaders in organized medicine, in the hospital and related health fields, with a view toward implementing nondiscrimination programs voluntarily. "I would hope that such a voluntary program would encompass not only Hill-Burton hospital facilities but all hospitals in the United States," he said.

The Supreme Court's "let stand" ruling foreshadowed a hospital desegregation drive throughout the south.

A spokesman for the National Association for the Advancement of Colored People, said hospital desegregation law suits were planned for a number of other southern cities. A spring trial already has been scheduled on a complaint against Grady Memorial Hospital in Atlanta, the largest public hospital there. Another suit involved a hospital in Newport News, Va.

The Supreme Court let stand a decision handed down November 1, 1963 by the Fourth U. S. Circuit Court of Appeals which held that hospitals built with Hill-Burton funds could not practice racial segregation as to both doctors and patients despite the "separate but equal" provision in the Hill-Burton act of 1946.

The Supreme Court issued only a brief order, with no explanatory opinion.

Eleven negro doctors, dentists and patients brought suit against the Wesley Long Community and Moses H. Cone Memorial hospitals in Greensboro federal district court in 1962. The negro litigants petitioned for an antisegregation order and for elimination of the "separate but equal" provision in the law.

The issue was whether participation by the State or Federal government, or both, brings government into the picture sufficiently to invoke the protection to individuals guaranteed in the U. S. Constitution. The guarantee of "equal protection of the laws" laid down in the 14th amendment, and other constitutional rights, may be enforced only against governments, not against private individuals.

The district court at Greensboro dismissed the suit of the negroes but it was overruled by the circuit court of appeals which held that the degree of state and federal involvement is sufficient under the Hill-Burton Program to bring the hospitals within the framework of constitutional requirements. This opinion noted that the United States had appropriated more than $1.2 million to Cone Memorial and almost $2 million to Wesley Long.

"The massive use of public funds and extensive state-federal sharing in the common plan are all relevant factors," the circuit court said.

At the time the suit was filed, Cone Memorial did not afford Negro doctors and dentists staff privileges and admitted only a few Negro patients. Long Hospital was completely segregated. Both are non-profit charitable corporations.

Later, Cone Hospital announced it would consider staff applications from Negroes.

★

President Johnson asked Congress to ap-

prove a program of federal aid to nursing education with a goal of increasing the nation's supply of professional nurses to 680,000 by 1970, an increase of 130,000.

In a special health message to Congress, Johnson also requested an extension of the Hill-Burton hospital construction program and again called for legislation that would increase social security taxes to provide hospitalization and other limited health care for the aged.

Dr. Edward R. Annis, president of the American Medical Association, termed the "fedicare" section of the president's health message as "a remarkable document of inconsistency and misinformation on health care for the elderly."

"Mr. Johnson declares that elderly Americans should not be subjected to a test of need for tax-paid medical care, but at the same time he urges all states to enact adequate Kerr-Mills medical aid for the aged programs," Dr. Annis said. "Eligibility for Kerr-Mills benefits is based on need. . . .

"Mr. Johnson claims that the average worker would pay no more than a dollar a month to pay for this program of hospitalization for the elderly. But the average industrial wage in this country is more than $100 a week, and the tax increase proposed by Mr. Johnson would cost the $100 a week worker $27.50, not $12. Employers would pay an additional $27.50 for a total payroll tax increase of $55 on every $100 in wages. And that would be only the beginning.

"Why should everyone over 65 get hospitalization at the expense of wage earners just because a few need help? Why should the workers of America be forced to pay higher taxes for hospitalization for everyone over 65, many of whom are wealthy and millions of whom have health insurance, just because they've had a birthday?

The AMA vigorously opposes the Administration's program that would be financed through social security, but supports the Kerr-Mills program which was enacted into law in 1960.

MEDICAL NEWS IN TENNESSEE

Vanderbilt University School of Medicine

Dr. William J. Darby, head of the department of biochemistry and nutrition, has been named by the American Medical Association to receive the 1964 Goldberger $1,000 award and plaque in clinical nutrition at the June meeting of the association in San Francisco. The AMA's Council on Foods and Nutrition, which established the award in cooperation with the Nutrition Foundation, awarded the citation to Dr. Darby for his "world wide contributions to medicine, nutrition and education." He was one of the co-discoverers of folic acid, and his recent research has led to the identification of a new anemia of children in the Middle East.

Dr. John B. Youmans, professor emeritus of medicine, received the Goldberger Award in 1963, thus making Vanderbilt the first medical school in the country to win the award twice.

★

Dr. Mark M. Ravitch, head of the department of surgery at the Johns Hopkins University School of Medicine, delivered the 11th annual Barney Brooks Memorial Lecture on March 6th. His topic was "Landmarks in Pediatric Surgery." The lectureship was established in 1953 in honor of Dr. Brooks, former professor of surgery at Vanderbilt and is presented each year by a surgeon recognized for outstanding contributions in his field.

★

The U. S. Public Health Service has approved a grant of approximately $115,000 to support the second year of a five-year study of reproductive physiology by the department of Obstetrics and Gynecology. In all, the five-year grant amounts to about $530,000.

University of Tennessee College of Medicine

Commencement exercises were held at Temple Baptist Church, Sunday, March 15th for 112 students of the medical unit. Graduates included 52 doctors of medicine, 28 doctors of dental surgery, two doctors of philosophy, one bachelor of science in nursing, two masters of science, five bachelors of science in medical technology and 23 dental hygienists.

The commencement address was delivered by Dr. Hebbel Hoff, chairman of the

Department of Physiology of Baylor University.

★

The College of Medicine has been awarded training grants totaling $76,264 from the National Institutes of Neurological Diseases and Blindness of the United States Public Health Service. The Division of Otology, Laryngology and Rhinology received $26,276; the Division of Neurological Surgery, $24,994, and the Division of Ophthalmology, $24,994. The grants were awarded to stimulate interest in the teaching and research programs in sensory diseases.

★

A grant of $39,325 has been received by the Department of Pathology to continue work on lung cancer. The two-year grant is from the National Cancer Institute. The work will reportedly concern a possible link between repeated lung infections and lung cancer.

★

The department of general practice at the University of Tennessee Memorial Research Center and Hospital, Knoxville, has received a five-year educational grant totaling $215,000 from the National Institute of Mental Health. Under the direction of the hospital's general practice department and the department of psychiatry, the grant will be used to provide additional psychiatric education and understanding to doctors who are not psychiatrists. Weekly conferences, open to any physicians in the Knoxville area, are held in which the doctors discuss specific types and cases of emotional stresses or disturbances they encounter when treating their patients. Some of the conferences are open to interns and residents at the University Hospital.

St. Jude Hospital, Memphis

Speakers for recent research seminars at St. Jude Hospital were Dr. Marvin Fishman, associate member of the Public Health Research Institute of New York City, and Dr. Harris Busch, professor of pharmacology at Baylor University College of Medicine. Dr. Fishman discussed the formation of antibodies in test tubes, and Dr. Busch spoke on cellular metabolism. Physicians, research scientists and students in these fields attended the sessions.

Meharry Medical College

A five-year service-research program has begun aimed at spotting mentally retarded children and those who are potential retardates earlier in life. Under a $64,000 grant from the U. S. Public Health Service, the pediatrics department at Meharry will closely screen children visiting the outpatient pediatric clinic as well as babies born in Hubbard Hospital. It is believed that this study can test techniques and prove methods which could be used in standard pediatric clinics to identify mentally retarded children.

★

The annual Hale-McMillan Lecture by Dr. C. Walton Lellehei, professor of surgery at the University of Minnesota, was held April 9th in the Public Health Lecture Hall of Meharry. Dr. Lellehei's subject was "Progress in the Surgical Treatment of Cardiac Disease."

New Laboratory at Central State Hospital, Nashville

Experts from widely different fields will come together in a new laboratory at Central State Hospital in an effort to untangle some of the "hows and whys" of drugs which affect the central nervous system. The program is jointly conducted by four departments at Vanderbilt University and the State Department of Mental Health. It is being financed by a five-year $408,000 grant to the departments of pharmacology, psychology, psychiatry, and anatomy at the university, and is the first program of its type in the southeastern United States and one of a few in the country.

Studies will range from basic investigation of chemical structure, to the effects of drugs on laboratory animal tissue, and blood and urine analysis of patients suffering various mental conditions.

New Biology Laboratory for Cancer Research

A new biology laboratory for cancer research has been completed by the Atomic

Energy Commission's Oak Ridge Operations. The Co-Carcinogenesis Laboratory has been turned over to Oak Ridge National Laboratory for use in a program to investigate relationship of chemicals and radiation to production of tumors and related abnormalities. The work is being conducted by ORNL under joint support of the National Institute of Health and the AEC.

Third Annual Conference on Mental Retardation

Dr. Stafford Warren, the President's special assistant in the field of mental retardation, was the principal speaker at the third annual conference on mental retardation held at Greene Valley Hospital and School, March 12-13. The conference, focused on presenting the latest research, treatment, education and programming for the mentally retarded, was designed to present information to the various professional disciplines and lay people who work in the field of mental retardation and are interested in advancing their knowledge in this area.

Nashville Surgical Society

Dr. J. Englebert Dunphy, chairman of the department of surgery at the University of Oregon Medical School, delivered the Nashville Surgical Society's annual oration on March 13th at Belle Meade Country Club. The public was invited to hear his address on "Ideals in Surgery."



Elkins Pk., Pa. 19117
Jan. 13, 1964

Journal of the Tenn. Med. Assoc.
Memphis, Tenn.

Dear Sirs:

For nineteen years I suffered numbness, tingling, burning, stinging, and pain in hands. Also some years ago the muscles at the base of my right thumb had atrophied. I went from one doctor to another in all that time and in hospitals for various studies. I saw general practitioners, specialists, circulatory, arthritis, neurologists, orthopedic, osteopathic, chiropractors, even psychiatric hypnotists! None helped. I had all kinds of oral medication, too numerous to mention, injections, including nerve block. I underwent treatments such as traction, oscillating bed, ultrasonic. I had two operations—scalenous articus, and cervical spinal fusion with lamenectomy of the 4th, 5th, 6th, 7th vertebra. I don't know whether I'm saying these correctly, being a layman (woman), but I'm sure you understand. I even contracted the "staph" infection with this latter operation. None of the above helped and you can imagine my discouragement. But, I didn't give up—I felt there must be a cause for this which must be found.

Finally, I was hospitalized at our Graduate Hospital in July, 1963. There, during my testing stay, Dr. Harold Dillon, neurologist, was sent to me. Thankfully, he was observant enough to notice raised areas on the inside surfaces of my wrists. He tapped them and I jumped—this sent shooting stings to my finger tips. He had "hit" it! He said, "Carpal tunnel syndrome!" He called others concerned, in on it—my circulatory doctor recommended electromiogram test for confirmation. There was a conference—they called the great neurosurgeon, Dr. Robert A. Groff, in and decided definitely on the operation at my right wrist first because with the atrophied muscle that was considered the worse. I hope you can imagine my joy at great relief from horrible suffering after this almost immediately. Oh, yes, I forgot to mention, I could find no comfortable place or position for my hands—sitting, standing, walking, lying down—necessitating sleeping pills nightly.

As the incision healed so my comfort in the right hand became greater. I, therefore, returned to the hospital to have my left hand done on 1/7/64. This was accomplished and I returned home on 1/9/64. Relief seemed instantaneous after the operation. When this, with the accompanying swelling and healing of nerve tissue, I expect almost complete relief in my left hand. You can imagine how happy I am at long last and most thankful.

Now, the reason I am writing this to you, is that on this last admission to Graduate Hospital on 1/6/64 the young Resident M.D., who came in for my history, I'm sorry I don't know his name, is from Memphis. He had wisely read my chart before seeing me and brought with him a paper—it appeared in your publication. Title—Numbness of the Hand by Dr. Bland W. Cannon, Journal of the Tenn. State Med. Assoc. 58:275, 1961.

Now, I feel that not enough M.D.'s are familiar with this cause of numbness and tingling, with its accompanying miseries, and, if they knew, could help many others like me. Relief could be so quick, especially if done by as fine a surgeon as I had. I, therefore, ask you to please submit this paper for publication in the A.M.A. Journal

for wider circulation. Also if you could send me at least a dozen copies of just that paper so I could distribute them personally to doctors I visited and one for me personally. In this way many others could benefit.

I feel you should know, too, something about me. I am 58 and a teacher, having retired just one year ago—Jan. 1, 1963. My hands never stopped me from doing things, but were a very significant reason for my retirement. I had 35 years of service. I found great difficulty in dressing—buttoning, hooking, pulling, touching, handling materials at home and elsewhere, driving, preparing foods at home, writing, even use of eating utensils—things that seem so easy to do—tying—things too numerous to mention. I was also quite a good pianist, which I had to give up, but am now looking forward to resumption.

I do hope you will consider all the above; I hope I have not been too lengthy; and that you will grant my requests.

Truly yours,

R. G. S.

P.S. 2/17/64

Reason for discrepancy in dates—above letter returned for wrong address on envelope or negligence of P.O. in not finding you. Also, at this time I wish to report that though I have so much better use of my hands, I still am troubled by a burning sensation in them, especially when my hands are in repose as in conversation and watching TV. I am told, however, this will go away too! Any suggestions? R.G.S.

PERSONAL NEWS

Dr. Walter Puckett, III has become associated with **Dr. Fred B. Ballard, Jr.** in the practice of internal medicine, with offices in the Medical Arts Building, Chattanooga.

Ten Memphis surgeons presented papers or participated in panel discussions during the sectional meeting of the American College of Surgeons, March 16-19 in New Orleans. They were: **Drs. Marcus J. Stewart, Alvin J. Ingram, Sam H. Sanders, Francis Murphey, Harold B. Boyd, R. Beverley Ray, William T. Black, Jr., L. Henning Mayfield, Robert P. McBurney** and **Roger T. Sherman. Dr. Ira L. Arnold** of Chattanooga and **Dr. E. Converse Peirce, II,** of Knoxville also participated in panel discussions at the four-day sectional meeting.

Dr. Harry L. Davis, Memphis, spoke on "Clinical Respiratory System Measurements" at a recent meeting of the Memphis Professional Technical Group on Bio-Medical Electronics.

"Family Health" was the subject discussed by **Dr. Robert Quinn,** Nashville, at a meeting of the American Family Group on March 5th.

New medical staff officers of the Lawrence County General Hospital are: **Dr. W. O. Crowder,** chief of staff; **Dr. V. L. Parrish,** vice chief of staff; and **Dr. J. C. Hudgins,** secretary.

Dr. Nat Winston, Chattanooga, was guest speaker at a recent meeting of the Marion County Teachers Association.

Dr. N. L. Hyatt, Covington, has been named vice president of the Mid-South Postgraduate Medical Assembly at its recent meeting in Memphis.

Dr. Martha Loving, Memphis, stressed the importance of annual check-ups at a meeting of the East Memphis Business and Professional Women's Club on March 16.

Dr. Charles W. March, formerly of Longview, Texas, has joined the staff of Queen City Infirmary in Tullahoma. He is a specialist in obstetrics and gynecology.

Dr. Earl Sullivan, Johnson City, was the guest speaker at a recent meeting of the Upper East Tennessee Society of Medical Technologists.

Dr. Robert H. Cofer, Cleveland, was recently certified as a specialist in internal medicine by the American Board of Internal Medicine.

Dr. A. Fount Russell, Clarksville, was honor guest at a dinner on February 21st and was presented a plaque and citation by the local association of Licensed Practical Nurses.

Dr. Bob G. Thompson of Ripley, has become associated with the Doctors Clinic at Gibson County General Hospital in Trenton.

Dr. A. D. Holt, Memphis, has been installed as president of the Tennessee Division of the American Cancer Society succeeding **Dr. B. F. Byrd, Jr.,** Nashville. A special citation of appreciation was presented to Dr. Byrd for his service as president of the state organization.

Dr. Robert Lash, Knoxville, director of the Poison Control Center, discussed the activities of the center before a meeting of the Knox County Association for Retarded Children.

Dr. William R. Lee of Copperhill has been named chief of staff at the Copper Basin Hospital.

Dr. James G. Hughes, Memphis, spoke on "Emotional Health of Grammar School Children" before the Covington Grammar School Parent-Teacher Association on March 12th.

Dr. William G. Stephenson, Chattanooga, has accepted the presidency of the Hamilton County Chapter, Arthritis and Rheumatism Foundation.

Dr. Walton Harrison, Jackson, addressed the meeting of the Jackson Lions Club. He discussed the importance and plans of the Sabin Oral Vaccination Program in that area.

Dr. Wm. H. L. Dornette has been re-elected chairman and **Dr. Harry L. Davis,** vice chairman of the Memphis Chapter of the Professional Technical Group on Bio-Medical Electronics.

Dr. Lyman A. Fulton announces the relocation of his offices to Suite 401, Professional Building, 112 East Myrtle Avenue, Johnson City.

Dr. Jack T. Swann, Nashville, has opened his office for the practice of pediatrics.

Dr. Edward C. Tyndal has opened his office for the practice of surgery in Memphis.

ANNOUNCEMENTS

Calendar of Meetings, 1964

State

May 21 —Middle Tennessee Medical Association, Claramont Inn, Sewanee

June 9-10 —Upper Cumberland Medical Society, Cloyd Hotel, Red Boiling Springs

Regional

May 2-6 —Medical Society of the State of North Carolina Annual Meeting, Greensboro

May 3-6 —Medical Association of Georgia Annual Session, Macon

May 3-6 —Arkansas Medical Society, Arlington Hotel, Hot Springs

May 4-6 —Louisiana State Medical Society, Evangeline Hotel, Lafayette

May 5-7 —South Carolina Medical Association, Ocean Forest Hotel, Myrtle Beach

May 6-10 —Florida Medical Association, Diplomat Hotel, Hollywood-by-the-Sea

May 11-14—Mississippi State Medical Association Annual Meeting, Jackson

National

May 1-2 —A.M.A. Congress on Environmental Health Problems, Sheraton-Chicago Hotel, Chicago

May 2 —American Society for Clinical Nutrition, Colton Manor Hotel, Atlantic City

May 4-8 —American Psychiatric Association, Biltmore Hotel, Los Angeles

May 11-14—American Urological Association, Penn-Sheraton Hotel, Pittsburgh

May 11-14—Aerospace Medical Association, Bal Harbour, Florida

May 17-22—American College of Obstetricians and Gynecologists, Americana Hotel, Bal Harbour, Florida

May 25-27—American Gynecological Society, Homestead Hotel, Hot Springs, Va.

May 28-30—American Ophthalmological Society, Homestead Hotel, Hot Springs, Va.

June 13-19—American Orthopaedic Association, Vancouver

June 18-19—American Pediatric Society, Olympic Western Hotel, Seattle

June 18-22—American College of Chest Physicians, Jack Tar Hotel, San Francisco

June 21-25—American Medical Association, Fairmont and Mark Hopkins Hotels and Civic Auditorium, San Francisco

Semiannual Meeting Middle Tennessee Medical Association

The 139th semiannual meeting of the Middle Tennessee Medical Association will be held May 21 at Claramont Inn, Sewanee. The varied and interesting program will include a symposium, "Encephalitis," with Dr. Dan S. Sanders, Jr. as moderator and Drs. William Clark, Sarah Sell and Bettye Schurter, all of Nashville, as panelists; a paper on "Psychodynamics of Juvenile Delinquency" by Robert B. Hagood of Chattanooga; and a paper entitled "Newer Techniques in Radiological Diagnosis" by Dr. Eugene Klatte of Nashville.

This program is acceptable for six accredited hours by the American Academy of General Practice.

Vanderbilt University School of Medicine Postgraduate Courses

The Division of Neurology (Medicine) of Vanderbilt University School of Medicine will present a one-day Postgraduate Day on "Management of Neurologic Problems in Office Practice" on Thursday, April 30. Some of the more benign neurologic disorders of office practice as well as the more difficult problems will be discussed, with emphasis on differential diagnosis and treatment.

★

The Department of Orthopedic Surgery will conduct a postgraduate symposium on "Soft Tissue Injuries of the Cervical Spine," on Thursday, May 7. The symposium will attempt to clarify the anatomical lesions of the soft tissue injuries of the cervical spine. The anatomy-clinical entities, neurosurgical, psychiatric and medico-legal aspects of the problem will be discussed. Dr. Charles Frankel, Professor of Orthopedic Surgery at the University of Virginia will be the guest speaker. Dr. Frankel, who has a law degree, will discuss end results and the problems related to the medico-legal phase in this group of injuries.

★

Both of these courses are acceptable for accredited hours by the American Academy of General Practice. For further information address the Division of Continuing Education, Vanderbilt University School of Medicine.

★

This Postgraduate Course to be given on Thursday, May 28 is designed to aid the physician in the aftercare of patients discharged from a mental hospital. The program will include a discussion of the use of drugs in the management of the emotional distrubances encountered in general office practice.

Guest speakers will be: Dr. Thomas Bidder, Associate Professor of Pharmacology and Associate Professor of Psychiatry at Western Reserve School of Medicine, Cleveland, Ohio; and Dr. Charles Vernon, Director of Community Services, State Department of Mental Health, Raleigh, North Carolina, and Clinical Associate Professor, Department of Psychiatry, University of North Carolina School of Medicine. He is Chairman of the Clinical Psychology Committee of the Academy of General Practice in North Carolina.

Registration will be held in the lobby of the Intensive Treatment Building at Central State Hospital at 8 a.m. Tuition and lunch for registrants will be by courtesy of Central State Hospital.

in virtually all diarrheas...prompt symptomatic control

LOMOTIL®

TABLETS / LIQUID—Each tablet and each 5 cc. of liquid contains:
diphenoxylate hydrochloride . . . 2.5 mg.
(Warning: May be habit forming)
atropine sulfate . . . . . 0.025 mg.



Lomotil controls the basic physiologic dysfunction in diarrhea—excessive propulsive motility. Pharmacologic evidence indicates that it does so by directly inhibiting propulsive movements of the intestines. This direct, well-localized activity controls diarrheas of widely varied origin and does so promptly, conveniently and economically.

The relatively few conditions in which Lomotil has given less than satisfactory control have been, for the most part, those such as severe ulcerative colitis in which too little anatomic or functional capacity of the intestines remains for the motility-lowering action of Lomotil to have effect.

It should be noted, however, that Lomotil has proved highly useful in mild to moderate ulcerative colitis and in several other refractory forms of diarrhea.

The recommended initial adult dosage is two tablets (2.5 mg. each) three or four times daily, reduced to meet the requirements of each patient as soon as the diarrhea is controlled. Maintenance dosage may be as low as two tablets daily. *Children's* daily dosage (in divided doses) varies from 3 mg. for a child of 3 to 6 months to 10 mg. for one 8 to 12 years of age. Lomotil is an exempt narcotic; its abuse liability is low and comparable to that of codeine. Recommended dosages should not be exceeded. Side effects are relatively uncommon but among those reported are gastrointestinal irritation, sedation, dizziness, cutaneous manifestations, restlessness and insomnia. Lomotil should be used with caution in patients with impaired liver function and in patients taking addicting drugs or barbiturates. Lomotil is a brand of diphenoxylate hydrochloride with atropine sulfate; the subtherapeutic amount of atropine is added to discourage deliberate overdosage.

Research in the Service of Medicine SEARLE

REFER EYE PATIENTS
TO AN
EYE PHYSICIAN

By so doing, you will be assured of a complete diagnosis of your patients' eyes.

Guild Opticians complete the cycle for Professional Service.

GUILD of PRESCRIPTION OPTICIANS of AMERICA

BE SAFE—BE SURE

SEE

YOUR GUILD OPTICIAN

FOR

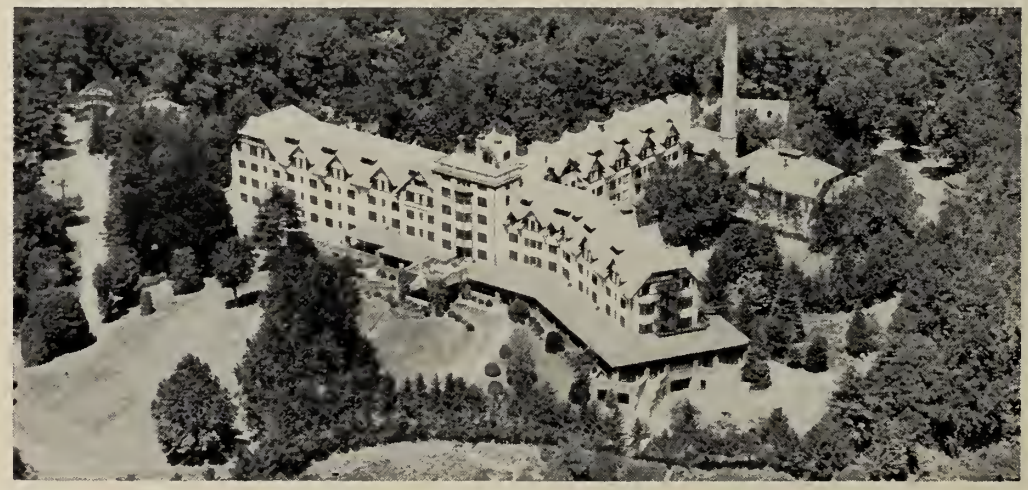
THE BEST SERVICE

EYE PHYSICIANS: Please Note—

Your prescriptions for glasses are "SAFE" when referred to a Guild Optician. Bound by the code of Ethics to uphold the highest standards in optical service.

APPALACHIAN HALL
Established 1916

Asheville North Carolina



An Institution for the diagnosis and treatment of Psychiatric and Neurological illnesses, rest, convalescence, drug and alcohol habituation.
Insulin Coma, Electroshock and Psychotherapy are employed. The Institution is equipped with complete laboratory facilities including electroencephalography and X-ray.
Appalachian Hall is located in Asheville, North Carolina, a resort town, which justly claims an all around climate for health and comfort. There are ample facilities for classification of patients, rooms single or en suite.

WM. RAY GRIFFIN, JR., M.D. MARK A. GRIFFIN, SR., M.D.
ROBERT A. GRIFFIN, M.D. MARK A. GRIFFIN, JR., M.D.

For rates and further information write
Appalachian Hall, Asheville, N. C.



TAKE 5

...and find that a TB screening test has never been quite so easy

SWAB THE ARM— UNCAP A TINE TEST— PRESS—DISCARD THAT'S ALL THERE IS TO IT.

Comparable to the Mantoux in accuracy and sensitivity, the TUBERCULIN, TINE TEST is now available in plastic-capped units uniquely suited to general practice needs. They are so simple to use that you can test every patient with ease. Since it requires no refrigeration, the new package of five Tine Test units can stand on any convenient table in your examining rooms, ready for routine use. Side effects are possible but very rare: vesiculation, ulceration or necrosis at test site. Contraindications, none; but use with caution in active tuberculosis.

available as the new individually-capped unit, boxes of 5, or in cartons of 25

TUBERCULIN, TINE TEST

(Rosenthal) Lederle

LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, N.Y. 7893-4 Lederle

Tennessee Medical Association's

Exclusively Approved

GROUP DISABILITY INCOME PROGRAM

Administered By

Smith, Reed, Thompson & Ellis Co.

1322 Nashville Trust Building
NASHVILLE 3, TENNESSEE
Phone 255-7625

WILLIAM H. ELLIS, C. L. U. MGR.
THOMAS G. HENRY

ASSOCIATES

Alden H. Smith, C. L. U.

Arthur D. Reed, C. L. U.

Joe Thompson, Jr., C. L. U.

Alden H. Smith, Jr., C. L. U.

E. Dan Smith, II

Underwritten By

Commercial Insurance Company

Newark, New Jersey

Nashville Surgical Supply Company

The Physician and Hospital's Complete Supply & Service Source

Physicians equipment and supplies

Hospital equipment and supplies

Laboratory equipment and supplies

THE MOST COMPLETE DRUG AND BIOLOGICAL SUPPLY SOURCE IN TENNESSEE

Distributor for Standard and Mattern X-Ray Equipment and Supplies

24-Hour Emergency Service

Nashville Surgical Supply Co., Incorporated

1911 Church St.

Nashville, Tennessee

Phone AL 5-4601

Remember, Doctor—

It's been

Tafel Surgical Supply Co., Inc.

SINCE 1889

for

Drugs, Orthopedic, Surgical

Supplies & Equipment

1203 Church Street

Nashville, Tennessee

Murfreesboro—Vacancies

STAFF PHYSICIANS for 1275 bed neuro-psychiatric hospital, including 350 general medical and geriatric. Modern facilities for diagnosis and treatment of mental illness. Salary $11,150 to $18,405 depending on qualifications; fringe benefits; cost of moving to Murfreesboro will be paid by Veterans Administration; visit here for evaluation can be arranged at our expense. Excellent educational opportunities for students in this area. Contact—Director, Veterans Administration Hospital, Murfreesboro, Tennessee.

Reprint Price Schedule

THE JOURNAL OF TENNESSEE MEDICAL ASSOCIATION

	100	200	300	400	500	600	700	800	900	1000	Add'l 1000
2 pages	12.80	14.15	15.60	17.30	17.65	18.00	18.55	19.50	20.70	21.85	12.00
4 pages	18.80	23.00	25.60	28.50	29.60	30.25	31.20	33.55	35.65	37.80	22.60
8 pages	36.80	41.60	46.15	51.00	52.30	53.00	54.45	57.85	61.50	64.90	35.00
12 pages	48.10	53.40	58.60	63.75	64.70	65.15	66.60	70.80	75.00	79.00	41.60
Envelopes 8¼x11¼	13.30	16.00	18.50	21.30	22.50	24.00	26.40	28.80	31.20	33.60	26.40

Reprints of articles in THE JOURNAL OF TENNESSEE MEDICAL ASSOCIATION are available at the following prices. Orders should be placed within 30 days following publication of the journal in which the article appears.

The above prices are for reprints supplied in the page size of THE JOURNAL OF TENNESSEE MEDICAL ASSOCIATION. If smaller or larger sizes are required, special prices must be obtained. Address

McQUIDDY PRINTING COMPANY **NASHVILLE, TENNESSEE**



YOU:

HISTORY: 20 years of study, plus internship/residency. Substantial investment in professional location, equipment. **SIGNS and SYMPTOMS:** Reports that large home, growing family and minimal professional standard of living are a concern. Still ahead—college costs, retirement, natural estate ambitions. **PROGNOSIS:** Needs 15-20 peak years of income to pay off education, home; rear family; retire. All this while battling tough taxes, and without the benefit of social security or company paid life and disability insurance, pension plan. **TREATMENT:** Learn about Mutual Benefit Life's "Seven Significant Benefits". Talk with a M.B.L. representative. See how a built-for-you plan solves specific problems through unique disability clauses, unusually high cash and loan values, liberal survivor income options—and more. Write on your own professional letterhead for exclusive report covering a full range of typical insurance requirements for physicians. Just ask for a copy of *Consultant's Report*.

Those who plan ahead get ahead **MUTUAL BENEFIT LIFE** INSURANCE COMPANY, NEWARK, NEW JERSEY

CARRIER OF YOUR TENNESSEE MEDICAL ASSOCIATION GROUP LIFE INSURANCE PLAN

EDWARD C. DUNN
1104 Sudekum Bldg.
Nashville, Tenn.

SETH W. SIZER
1211 James Bldg.
Chattanooga, Tenn.

THERON M. LEMLY
1309 Poplar Ave.
Memphis, Tenn.



San Francisco—the Perfect Opportunity to Mix Postgraduate Study With Pleasure!

Start the summer at the world's greatest medical meeting in America's most picturesque city. Now after six years the AMA returns with the outstanding scientific program of 1964. In just five compact days, you can make a comprehensive review of the most recent medical progress in general practice and **all** the specialties.

- **60** original papers on organ transplants and hyperbaric oxygen
- **6** general scientific meetings: diagnosis of acute liver disease, autoimmune mechanisms & disease, cardiovascular opacification, tumors of the endocrine function, hyperbaric oxygen phenomena, and computers in medicine
- **22** medical specialty programs
- **750** scientific and industrial exhibits
- **Special** program on heart disease by the AMA, American College of Cardiology, and the American Heart Association
- **Lectures, Panel Discussions, Motion Picture Premieres, Color Television**

All This, and San Francisco, too—and Don't Forget to Bring the Family!

JUNE 21-25 1964

◁ ◁ ◁ See JAMA May 9 for complete scientific program — Forms for advance registration and hotel accommodations ▷ ▷ ▷

PLACEMENT SERVICE

The Placement Service of the Tennessee Medical Association is designed to assist doctors and communities. Further information, and contacts to both physicians and communities, is available from the Public Service Office, 112 Louise Avenue, Nashville, Tennessee—phone 291-4584.

Locations Wanted

UROLOGIST, 31 years of age, graduate of the University of Virginia, would like to establish clinical, assistant, associate or institutional practice in East Tennessee or Middle Tennessee city of 25,000 plus. Married. Protestant. Now in residency. Available July 1964. LW-488

◆

ORTHOPEDIC PHYSICIAN, 30 years of age, now in residency, would like to establish associate or solo practice in any Middle or East Tennessee area of 15,000 to 150,000 population. Graduate Tulane School of Medicine. Married. Available within 30 days. LW-492

◆

GENERAL PRACTITIONER, age 42, graduate Oklahoma School of Medicine, would like assistant, clinical, industrial or insurance practice in any community in Tennessee. Now in private practice but like to relocate for better educational opportunities. Married. Protestant. Available 30 days notice. LW-493

◆

SURGEON, 31 years of age, graduate of the University of Rochester, member American Board of Surgeons, Candidate American College of Surgeons, would like associate or clinical practice anywhere in Tennessee with population 10,000 to 300,000. Married, Protestant. Available July 1964. LW-505

◆

RETIRED PHYSICIAN, native of northern state, would like to assist in private practice or clinical work in the fields of chronic diseases, arthritis, cancer and surgery. Graduate University of Chicago. Prefers small city in Middle Tennessee. Available upon notice. LW-506

◆

RADIOLOGIST, Board certified, 12 years experience, would like to relocate in Tennessee. Graduate University of Virginia School of Medicine. G.P. background. Would like affiliation with small hospital in any part of Tennessee. Age 55. Health excellent. Hebrew. Available immediately. LW-507

◆

GENERAL SURGEON, 33 years of age, now in residency, graduate University of Tennessee College of Medicine, would like affiliation with clinic in any part of Tennessee. Board qualified as of April, 1964. Married. Protestant. Available April 1964. LW-508

◆

ORTHOPEDIC-SURGEON, age 31, graduate of the University of Virginia School of Medicine, now in residency, would like associate practice anywhere in Tennessee with 50,000 plus. Married. Protestant. Available July 1, 1964. LW-509

◆

INTERNIST, with sub-specialty in endocrinology, age 29 years, now in residency, would like any type practice in Middle or West Tennessee area with 25,000 plus population. Graduate University of Tennessee College of Medicine. Single. Methodist. Available November 1, 1964. LW-511

◆

OBSTETRICIAN - GYNECOLOGIST, age 34, married, graduate of the University of Arkansas, would like partnership practice in Middle or West Tennessee city of 40,000 plus. Board certified. Jr. Fellow American College of Surgeons; Fellow American College Ob-Gyn. Available July 1, 1964. LW-528

Physicians Wanted

GENERAL PRACTITIONER needed in East Tennessee community of 6,000 as associate. Age 25-35, with one year internship. New, private offices; examining rooms and equipment available. Hospital located in community. PW-134

◆

GENERAL PRACTITIONER needed in small southern Tennessee town of over 500. No other physician in the community. Office space and some equipment available. PW-147

◆

ASSOCIATE general practitioner wanted in East Tennessee city of 2,000 plus. Share office and equipment. Good housing facilities available. Hospital 15 miles. PW-169

◆

PHYSICIAN needed in small town in north Tennessee. No other physician in county. Approved for Sears-Roebuck Foundation assistance. Support of civic and business leaders assured. PW-177

◆

GENERAL PRACTITIONER, with surgical experience, needed in Middle Tennessee town of over 12,000. Replacement in clinic. Housing and office space with equipment available. PW-188

◆

GENERAL PRACTITIONER, or General Surgeon, needed as associate or assistant in large clinic in Middle Tennessee city of over 10,000. Requirements include high morals with no alcoholic beverages. Must have residency training. PW-200

◆

INTERNIST needed as an assistant, in West Tennessee city of 15,000. Well established and equipped office. Age 25-35. Hospital practice required. Area agricultural and industrial one. Good opportunity. PW-203

◆

FOR LEASE OR SALE—practice and office equipment of recently deceased physician in West Tennessee city of 5,000. Office space consists of two examining rooms, two treatment rooms, laboratory, plus other essential facilities. General practice with general surgery. PW-204

◆

FOR LEASE; 1,000 square feet in an uptown office building of a Middle Tennessee town of 12,500. Fully equipped with x-ray and laboratory; parking area connected; modern, centrally air-conditioned and heated. Physician going into institutional practice. PW-205

◆

INDUSTRIAL PHYSICIAN, 25-40 years of age, needed for industrial medicine by large concern in East Tennessee city of 180,000. Office space and equipment provided. Regular office hours. Will assist in obtaining housing if desired. Salary and fringe benefits. Excellent position. PW-206

Is There A Doctor - - - -

WHO WANTS TO DRIVE A NEW CAR—

With No Capital Investment . . . Simplified Tax Deductions . . . Which May Save You Money . . . And No Worries About—Maintenance . . . Depreciation . . . Tires . . . Insurance . . . Or License?

Call or Visit the Lease Department of

OAK FORD **SALES AND SERVICE**

915 FIFTH AVE. NORTH
NASHVILLE 3, TENN. **MOTORS**

Tel. AL 5-8661

We are a member of Largest Leasing System in the U. S.

Ford **AUTHORIZED LEASING SYSTEM**

List of Advertisers in This Issue

American Cynamid Company	XI, XXX, XXXI, XXXV	Nashville Pure Milk Co.	XXVIII
Ames Co., Inc.	XLIII	Nashville Surgical Supply Co., Inc.	XXXVII
Appalachian Hall	XXXIV	Oak Motors	XLII
Baker Laboratories, Inc.	VIII, IX	Parke-Davis and Company	II
Blood Bank Foundation	XXII	Placement Service	XLI
Brayten Pharmaceutical Company	XV	Robins, A. H. Co.	Insert, XXI
Burroughs Wellcome & Co.	XII, XVIII	Roche Laboratories	XLIV
Chatham Pharmaceuticals, Inc.	XIV	Saunders, W. B. Company	III
Coca-Cola	XXVI	St. Albans	XXIX
Farringer & Company	XXVII	Searle, G. D. & Co.	XXXIII
First Texas Pharmaceuticals, Inc.	X	Silver Hill Foundation	XXVI
Glenbrook Laboratories	XXIII	Smith, Kline & French Laboratories	VI
Guild Opticians	XXXIV	Smith, Reed, Thompson & Ellis Co.	XXXVI
Hill Crest Sanitarium	XXVIII	Tafel Surgical Supply Co., Inc.	XXXVIII
Kay Surgical, Inc.	XXII	VA Hospital, Tuskegee, Ala.	XXVIII
Lilly, Eli and Co.	I, XXXII	Wallace Laboratories	VII, XIII, XIV, XVI, XVII, XXIV, XXV
McQuiddy Printing Co.	XXXVIII	White Surgical Supply Co.	XXVIII
Murfreesboro VA Hospital	XXXVIII	Winthrop Laboratories	V
Mutual Benefit Life Ins. Co.	XXXIX		

neither **tension**, nor **spasm**,
nor **stasis**
stays this patient
from his
appointed rounds



DECHOLIN-BB®

. . . . . especially when
UPPER G.I. COMPLAINTS
have biliary implications

for nervous **tension**

for smooth-muscle **spasm**

for biliary/intestinal **stasis**

Each Tablet Contains:

BUTABARBITAL SODIUM 15 mg. (¼ gr.).
WARNING: May be habit forming

BELLADONNA EXTRACT 10 mg. (⅙ gr.).

DEHYDROCHOLIC ACID 250 mg. (3¾ gr.).

Average adult dose: 1 or, if necessary, 2 tablets three times daily. **Precautions:** Observe patients periodically for increased intraocular pressure and barbiturate habituation or addiction; caution drivers against possible drowsiness. **Side effects:** Dehydrocholic acid may cause transitory diarrhea; belladonna may cause blurred vision and dry mouth. **Contraindications:** Biliary tract obstruction, acute hepatitis, glaucoma, prostatic hypertrophy. **Available:** DECHOLIN-BB, bottles of 100 tablets. **Also:** DECHOLIN® with Belladonna (dehydrocholic acid, 250 mg.; belladonna extract, 10 mg.) and DECHOLIN® (dehydrocholic acid, 250 mg.), bottles of 100 and 500 tablets.

AMES COMPANY, INC.
Elkhart • Indiana
Toronto • Canada

3468263



New from Roche research

Valium®
(diazepam)

for
—situational, stress-induced tension
—the psychic tension of the common psychoneuroses
—emotional tension intensified by concomitant somatic components

also for
—the muscle spasms of cerebral palsy and athetosis

Dosage—Adults: Mild to moderate psychoneurotic reactions, 2 to 5 mg b.i.d. or t.i.d.; severe psychoneurotic reactions, 5 to 10 mg t.i.d. or q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; muscle spasm with cerebral palsy or athetosis, 2 to 10 mg t.i.d. or q.i.d.

Contraindications: Valium (diazepam) is contraindicated in infants, patients with a history of convulsive disorders or patients with a history of glaucoma.

Warning: Valium (diazepam) is not of value in dealing with psychotic patients manifesting anxiety and should be avoided when there is reason to believe the patient is psychotic.

Precautions: In elderly or debilitated patients, it is important to limit the dosage to the smallest effective amount to preclude the development of ataxia or oversedation (not more than 1 mg, 1 or 2 times daily initially, to be increased gradually as needed and tolerated). As is true of all CNS-acting drugs, until the correct maintenance dosage is established, patients receiving Valium (diazepam) should be advised against possibly hazardous procedures requiring complete mental alertness or physical coordination. Driving an automobile during the period of Valium (diazepam) therapy is not recommended. In general, the concurrent administration of Valium (diazepam) and other psychotropic agents is not recommended. If such combination therapy is used, careful consideration should be given to the pharmacology of the agents to be employed with Valium (diazepam)—particularly with known compounds which may potentiate the action of Valium (diazepam), such as phenothiazines, barbiturates, MAO inhibitors and other antidepressants.

Since Valium (diazepam) has a central nervous system depressant effect, patients should be advised against the simultaneous ingestion of alcohol and other central nervous system depressant drugs during Valium (diazepam) therapy. Safe use of Valium (diazepam) during pregnancy has not been established. The usual precautions are indicated when Valium (diazepam) is used in the treatment of anxiety states where there is any evidence of impending depression; particularly the recognition that suicidal tendencies may be present and protective measures may be necessary. The usual precautions in treating patients with impaired renal or hepatic function should be observed.

Side effects: In clinical use, fatigue, drowsiness and ataxia have been reported; in most instances these are dose-related and may be avoided by proper dosage adjustment. Mild nausea and dizziness may occur on occasion. As with any new agent, when it is administered for protracted periods of time, periodic blood counts and liver function tests are advisable. Abrupt cessation after prolonged overdosage may, in some patients, produce withdrawal symptoms (*e.g.*, convulsions, tremor, abdominal and muscle cramps, vomiting, sweating) similar to those seen with barbiturates, meprobamate and Librium® (chlordiazepoxide HCl). Changes in EEG patterns have been observed in patients during and after Valium (diazepam) treatment.

Paradoxical reactions, such as excitement, depression, stimulation, sleep disturbances, acute hyperexcited states and hallucinations have been reported. Other side effects noted have been blurred vision, diplopia, headache, incontinence, slurred speech, tremor and skin rash.

How supplied: For oral administration: Valium (diazepam) scored tablets, 2 mg, white, bottles of 50 and 500; 5 mg, yellow, bottles of 50 and 500.

ROCHE LABORATORIES / Division of Hoffmann-La Roche Inc / Nutley, N. J. 07110

6/1/64

LIBRARY OF THE RHODE ISLAND MEDICAL SOCIETY

THE JOURNAL OF THE

TENNESSEE MEDICAL ASSOCIATION

UPPER CUMBERLAND MEDICAL SOCIETY
Cloyd Hotel, Red Boiling Springs, Tennessee
June 9-10, 1964

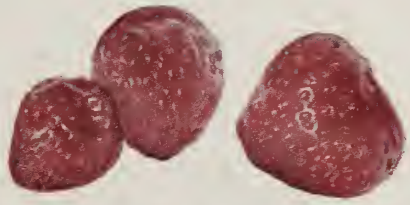
ANNUAL CONVENTION
AMERICAN MEDICAL ASSOCIATION
June 20-26, 1964
San Francisco, California

MAY, 1964

Volume 57 **Number 5**

e of Contents on Page IV
t to Advertisers on Page XL

tempting strawberry taste treat
for your iron-deficient patients



Zentron® Chewable

Iron, Vitamin B Complex, and Vitamin C

Combines iron with B complex vitamins in a chewable tablet

Additional information available upon request.
Eli Lilly and Company, Indianapolis 6, Indiana.

Lilly

400137



if they can't see the woods for the pollen...

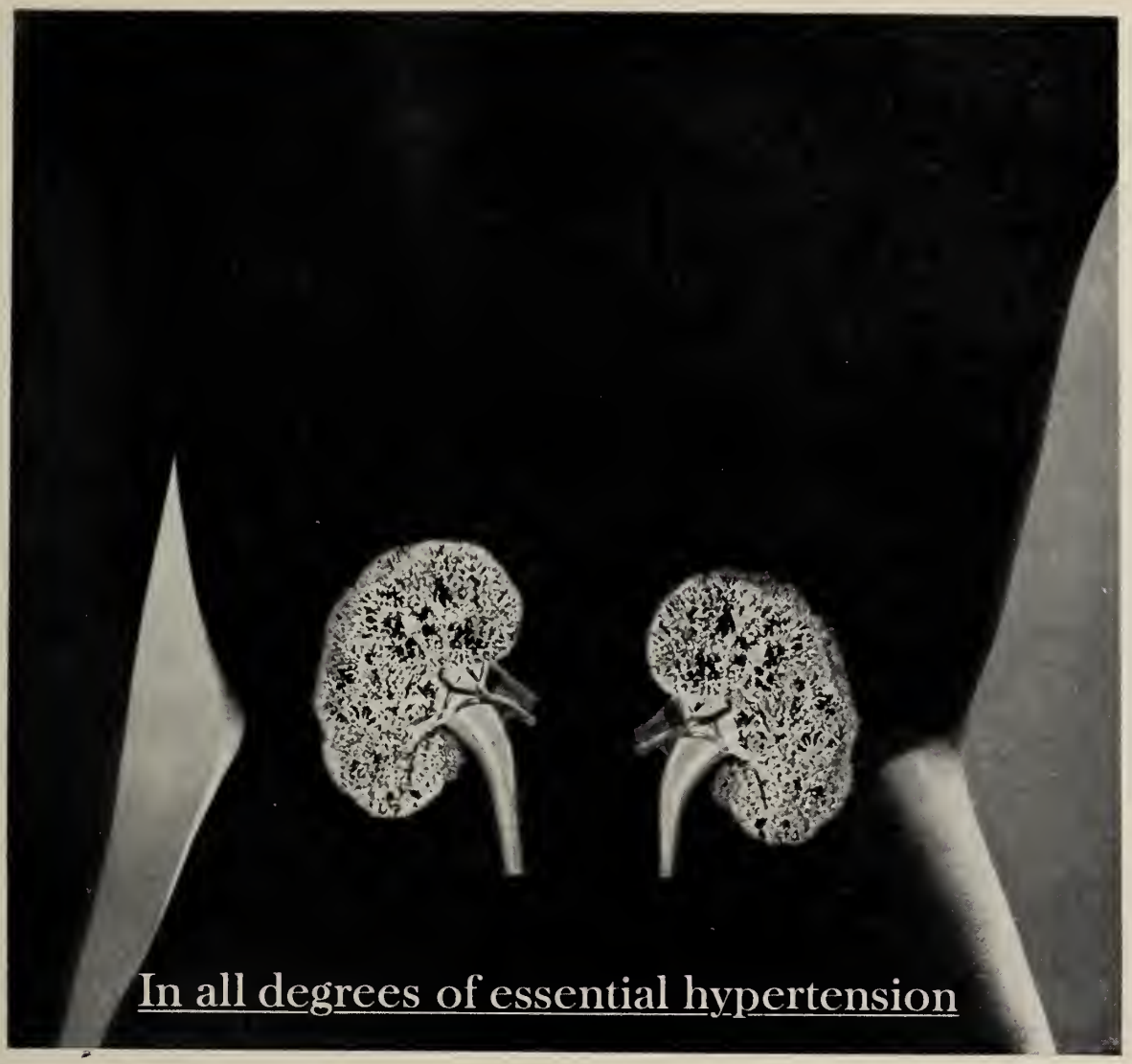
Benadryl®
(diphenhydramine hydrochloride)

PARKE-DAVIS

Throughout the pollen season this time-tested agent provides twofold action to relieve allergic symptoms. *Antihistaminic action* relieves nasal congestion, sneezing, lacrimation, and pruritus. *Antispasmodic action* relieves bronchial spasm. *Precautions:* Persons who have become drowsy on this or other antihistamine-containing drugs, or whose tolerance is not known, should not drive vehicles or engage in other activities requiring keen response while using this product. Hypnotics, sedatives, or tranquilizers, if used with this product, should be prescribed with caution because of possible additive effect. Diphenhydramine hydrochloride has an atropine-like action which should be considered when prescribing it. BENADRYL (diphenhydramine hydrochloride) is supplied in several forms including Kapseals® containing 50 mg. 43364

PARKE-DAVIS

PARKE, DAVIS & COMPANY, Detroit, Michigan 48232



Help protect the kidneys and other threatened organs

When treatment of hypertension is effective the danger of damage to the renal system is reduced.[1,2] "Hypertensive patients suffer from vascular deterioration roughly proportional to the severity of the hypertension... Reduction of blood pressure to normotensive levels reduces or arrests the progress of vascular damage with a resultant decrease in morbidity and mortality."[1] *Because Rautrax-N lowers blood pressure so effectively, it will help provide this important protection not only for the kidneys but also for the heart and brain of your hypertensive patients.* Rautrax-N is effective in mild,[3] moderate,[3,4] or severe hypertension.[4,5]

Dosage: Initially, 1 to 4 tablets daily preferably at mealtime. For maintenance, 1 or 2 tablets daily.

Side effects and precautions: Rauwolfia preparations may cause reversible extrapyramidal symptoms and emotional depression. Caution indicated in use with depression, suicidal tendencies, peptic ulcer. Minor side effects: diarrhea, weight gain, nausea, drowsiness. Bendroflumethiazide may cause reversible hyperuricemia and/or gout, unmask latent diabetes, increase glycosuria in diabetics. Caution indicated in use for patients on digitalis, with severely damaged kidneys, renal insufficiency, increasing azotemia, cirrhosis. Contraindicated in complete renal shutdown. Minor side effects: leg or abdominal cramps, pruritis, paresthesias, mild rashes.

Supply: Rautrax-N—capsule-shaped tablets providing 50 mg. Raudixin® [Rauwolfia serpentina whole root], 4 mg. Naturetin® [bendroflumethiazide], and 400 mg. potassium chloride. *Rautrax-N Modified*—50 mg. Raudixin [Rauwolfia serpentina whole root], 2 mg. Naturetin [bendroflumethiazide], and 400 mg. potassium chloride, in capsule-shaped tablets. For full information, see your Squibb Product Reference or Product Brief.

References: (1) Moyer, J. H., and Heider, C.: Am. J. Cardiol. *9*:920 (June) 1962. (2) Brest, A. N., and Moyer, J. H.: Pennsylvania M. J. *63*:545 (Apr.) 1960. (3) Berry, R. L., and Bray, H. P.: J. Am. Geriatrics Soc. *10*:516 (June) 1962. (4) Hutchison, J. C.: Current Therap. Res. *4*:610 (Dec.) 1962. (5) Feldman, L. H.: North Carolina M. J.: *23*:248 (June) 1962.

SQUIBB
Squibb Quality
—the Priceless Ingredient
SQUIBB DIVISION Olin

RAUTRAX®-N RAUWOLFIA SERPENTINA WHOLE ROOT (50 MG.), BENDROFLUMETHIAZIDE (4 MG.) WITH POTASSIUM CHLORIDE (400 MG.), SQUIBB

The Journal of the TENNESSEE MEDICAL ASSOCIATION

Published Monthly

By Tennessee Medical Association

OFFICE OF PUBLICATION, 112 LOUISE AVENUE, NASHVILLE 5, TENNESSEE

Second Class Postage Paid at Nashville, Tennessee

Volume 57
No. 5

MAY, 1964

Per Year, $5.00
Single Copy, 50 Cents

Published Monthly

Contents

The Tennessee Congress on Mental Illness and Health 171

Working Together for Community Mental Health Services, ROBERT S. GARBER, M.D., Belle Mead, N. J. 171

Cooperative Action for Mental Health, PHILIP E. RYAN, M.A., New York, N. Y. 177

Information and Education in Community Mental Health, WILLIAM F. SHEELEY, M.D., Washington, D. C. 182

Mental Disease: Medicine's Dilemma and Manifest Destiny, LINDSAY BEATON, M.D., Tucson, Ariz. 187

Action for Mental Health—The Joint Commission Report, KENNETH E. APPEL, M.D., Philadelphia, Pa. 192

Remarks of Governor Frank G. Clement 195

What's Happening in Tennessee, JOSEPH J. BAKER, M.D., Nashville, Tenn. 197

Closing Summary, LINDSAY BEATON, M.D., Tucson, Ariz. 199

Staff Conference 202

Clinicopathologic Conference 207

President's Letter 213

Editorial 214

Programs and News of Medical Societies 216

National News 216

Medical News in Tennessee 218

Personal News 220

Announcements 221

Officers of the TMA 1964-65 223

TMA Standing Committees 224

Instructions to Contributors

Manuscripts submitted for consideration for publication in the JOURNAL OF THE TENNESSEE MEDICAL ASSOCIATION should be addressed to the Editor, Dr. R. H. Kampmeier, Vanderbilt University Hospital, Nashville 12, Tennessee.

Manuscripts must be typewritten on one side of letter-weight paper. Either double or triple spacing and wide margins must be provided to facilitate editing which will be legible for the printer.

Bibliographic references should not exceed ten or twelve in number documenting key publications. They should appear at the end of the paper. The bibliographic references must conform to the style used in the American Medical Association publications, as,—Alais, F. G.: What Is Known About It, J. Tennessee M. A., 35:132, 1950.

Illustrations must be mounted on white cardboard and be numbered. The editor will determine the number, if any, of illustrations to be used. Additional illustrations will be charged to the author. The author's name should appear on the back of each illustration.

If reprints are desired, the requested number should be indicated in the letter accompanying the manuscript. The author will be billed by the publisher.

DEVOTED TO THE INTERESTS OF THE MEDICAL PROFESSION OF TENNESSEE
R. H. KAMPMEIER, M.D., Editor
This Association Does Not Officially Indorse Opinions Presented in Different Papers Published herein
Copyright, 1964, by the Tennessee Medical Journal

disability without debilitation . . .



supportive oral anabolic therapy • potent • well-tolerated

Disabling illness or injury at any time of life can invite a slowdown in the natural anabolic processes or acceleration of catabolic processes, resulting in a "wasting" of protein and minerals needed for tissue repair. Loss of weight and appetite, strength and vitality, may be the evident signs of this process, frequently accompanied by a lowering of mood, interest and activity. The older the patient, the more pronounced may be the signs of debilitation. A potent, well-tolerated anabolic agent plus a diet high in protein can make a remarkable difference.

WINSTROL® brand of STANOZOLOL

. . . a new oral anabolic agent, combines high anabolic activity with outstanding tolerance. Although its androgenic influence is extremely low*, women and children should be observed for signs of slight virilization (hirsutism, acne or voice change), and young women may experience milder or shorter menstrual periods. These effects are reversible when dosage is decreased or therapy discontinued. Patients with impaired cardiac or renal function should be observed because of the possibility of sodium and water retention. Liver function tests may reveal an increase in BSP retention, particularly in elderly patients, in which case therapy should be discontinued. Although it has been used in patients with cancer of the prostate, its mild androgenic activity is considered by some investigators to be a contraindication.

Dosage in adults, *usually 1 tablet t.i.d.;* young women, *1 tablet b.i.d.;* children (school age), *up to 1 tablet t.i.d.;* children (pre-school age), ½ *tablet b.i.d. Shows best results when administered with a high protein diet. Available as scored tablets of 2 mg. in bottles of 100.*

*The therapeutic value of anabolic agents depends on the ratio of anabolic potency to androgenic effect. This anabolic-androgenic activity ratio of Winstrol is greater than that of all the oral anabolic agents currently in use.

Winthrop

Winthrop Laboratories, New York, N. Y.



release for hostility?

Overeating is often an outlet for feelings of hostility. Many people take out their anger by overindulgence at or between meals. As a result they become overweight.

'Eskatrol' *Spansule* capsules both control appetite and relieve the emotional stress that causes overeating. That's why so many patients are losing more pounds with 'Eskatrol'.

ESKATROL® Trademark

Each capsule contains Dexedrine® (brand of dextroamphetamine sulfate), 15 mg., and Compazine® (brand of prochlorperazine), 7.5 mg., as the maleate.

SPANSULE®

brand of sustained release capsules

because emotions play an important role in overweight

Brief Summary of Principal Side Effects and Cautions

Side effects (chiefly nervousness and insomnia) are infrequent, and usually mild and transitory. *Cautions:* 'Eskatrol' *Spansule* capsules should be used with caution in the presence of severe hypertension, advanced cardiovascular disease, or extreme excitability. There is a possibility, though little likelihood, of blood or liver toxicity or neuromuscular reactions (extrapyramidal symptoms) from the phenothiazine component in 'Eskatrol' *Spansule* capsules.

For complete prescribing information, please see *PDR* or available literature.

Supplied: Bottles of 50 capsules.

Smith Kline & French Laboratories SK&F



relieves pain and relaxes muscle

TRAUMA!

Following traumatic injury, patient comfort can be increased and recovery time shortened by the simultaneous treatment of both pain and muscle spasm with 'Soma' Compound.

Soma® Compound

carisoprodol 200 mg., acetophenetidin 160 mg., caffeine 32 mg.

Also available with ¼ gr. codeine as SOMA® COMPOUND WITH CODEINE: carisoprodol 200 mg., acetophenetidin 160 mg., caffeine 32 mg., codeine phosphate 16 mg. (Warning: may be habit forming).

WALLACE LABORATORIES/ *Cranbury, N.J.*

Side effects: Although there has been no evidence of tolerance, withdrawal symptoms or excessive self-medication, 'Soma' Compound and 'Soma' Compound with Codeine, like other central nervous system depressants, should be used with caution in addiction-prone individuals. While codeine addiction is relatively rare and easily broken, the same precautions must be observed as for any other opium alkaloid. Nausea, vomiting, constipation and miosis are possible codeine side effects. Should symptoms of hypersensitivity occur, discontinue medication.

Contraindications: None reported.

Complete product information available in the product package, and to physicians upon request.

Dosage: Usual dosage is 1 or 2 tablets 4 times daily.

Supplied: 'Soma' Compound is available in orange, scored tablets; bottles of 50. 'Soma' Compound with Codeine (narcotic order form required) is available in white, lozenge-shaped tablets; bottles of 50.

CSO-1054



Both the Cream and Ointment rarely sensitize and are bactericidal to virtually all gram-positive and gram-negative organisms found topically, including Pseudomonas aeruginosa and Staphylococcus aureus.

Indications: Wherever infection occurs and is accessible for topical therapy.

Caution: As with other antibiotic preparations, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs.

'NEOSPORIN'® brand
POLYMYXIN B / NEOMYCIN / GRAMICIDIN
ANTIBIOTIC CREAM

Ingredients: Each gram contains: 'Aerosporin'® brand Polymyxin B* Sulfate 10,000 Units; Neomycin Sulfate 5 mg. (equivalent to 3.5 mg. Neomycin Base); Gramicidin 0.25 mg.

In a smooth, white, water-washable vanishing cream base with a pH of approximately 5.0. Inactive ingredients: liquid petrolatum, white petrolatum, distilled water, propylene glycol, polyoxyethylene polyoxypropylene compound, emulsifying wax and 0.25% methylparaben as preservative.

*U.S. Patent Nos. 2,565,057-2,695,261

Available: In 15 Gm. tubes.

'NEOSPORIN'® brand
POLYMYXIN B / BACITRACIN / NEOMYCIN
ANTIBIOTIC OINTMENT

Ingredients: Each gram contains: 'Aerosporin'® brand Polymyxin B Sulfate 5,000 Units; Zinc Bacitracin 400 Units; Neomycin Sulfate 5 mg. (equivalent to 3.5 mg. Neomycin Base).

Available: Tubes of 1 oz., ½ oz. and ⅛ oz.

Complete literature available on request from Professional Services Dept. PML.

BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, N.Y.



the most widely prescribed peripheral vasodilator...

increases blood flow...



IN CIRCULATORY DISORDERS OF THE INNER EAR

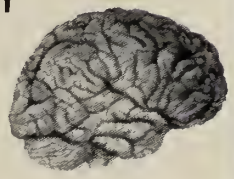
where decreased blood flow results in hearing loss (sudden onset), tinnitus, or vertigo.

IN PERIPHERAL VASCULAR DISEASES

where ischemia causes muscle distress—pain, spasm, ache, intermittent claudication; also coldness, numbness or ulceration of extremities.

IN CEREBROVASCULAR INSUFFICIENCY

where vascular insufficiency may cause such symptoms as mental confusion, diplopia, fatigue, apathy, and behavior problems.



IN CIRCULATORY DISORDERS OF THE EYE

where there is vasospastic and circulatory impairment.



Available in 6 mg. scored tablets, and 5 mg. per cc. parenteral solution.



• VASODILATIVE / VASORELAXANT **ARLIDIN®** (NYLIDRIN HCl)

decreases resistance in arteries and arterioles in skeletal muscle, in the brain, and possibly in the eye and inner ear • increases cardiac output (minute stroke volume) without significant changes in pulse rate or blood pressure • especially useful in enhancing blood flow in ischemic tissues • essentially safe, well tolerated, with rapid and sustained response • economical

use with caution in the presence of a recent myocardial lesion, severe angina pectoris, and thyrotoxicosis.

contraindicated in acute myocardial infarction.

Protected by U.S. Patent Numbers: 2,661,372 and 2,661,373

U. S. VITAMIN & PHARMACEUTICAL CORPORATION
800 Second Avenue, New York, N. Y. 10017

reduce or obviate the need for transfusions and their attendant dangers

KOAGAMIN is indicated whenever capillary or venous bleeding presents a problem. KOAGAMIN has an outstanding safety record -- in 25 years of use no report of an untoward reaction has been received; however, it should be used with care on patients with a predisposition to thrombosis.



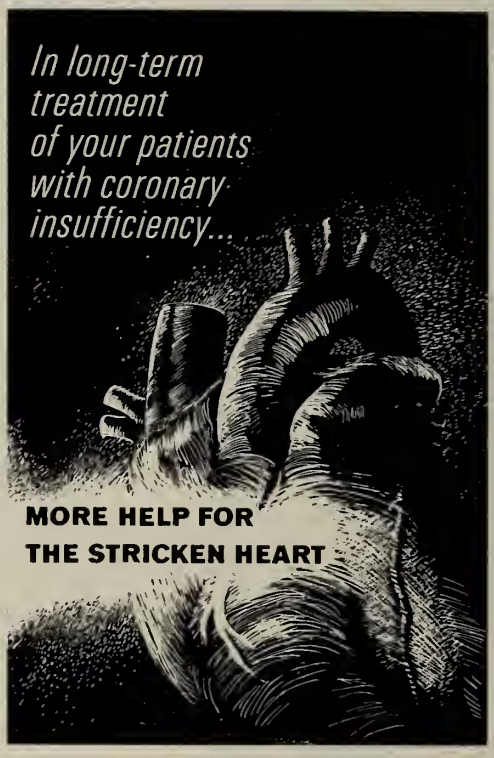
KOAGAMIN®

parenteral hemostat

Each cc contains: 5 mg. oxalic acid, 2.5 mg. malonic acid, phenol 0.25%; sodium carbonate as buffer.

Complete data with each 10cc vial. Therapy chart on request.

CHATHAM PHARMACEUTICALS, INC.
Newark 2, New Jersey
Distributed in Canada by Austin Laboratories, Ltd. • Paris, Ontario



- **PETN (pentaerythritol tetranitrate) to increase oxygen supply**
- **plus meprobamate to decrease anxiety and tension**

Unlike phenobarbital, meprobamate is *not* cumulative and does *not* cause depression.

Side effects: Pentaerythritol tetranitrate may infrequently cause nausea and mild headache, usually transient. Slight drowsiness may occur with meprobamate and, rarely, allergic reactions. **Precautions:** Meprobamate may increase effects of excessive alcohol. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction. **Contraindications:** Like all nitrate-containing drugs, 'Miltrate' should be given with caution in glaucoma. *Complete product information available in the product package, and to physicians upon request.* **Dosage:** 1 to 2 tablets, *before meals* and at bedtime. Individualization required. **Supplied:** Bottles of 50 tablets.

CML-1055

MILTRATE®

meprobamate 200 mg.+ pentaerythritol tetranitrate 10 mg.

WALLACE LABORATORIES / *Cranbury, N. J.*



FOR YOUR ELDERLY ARTHRITIC PATIENTS...

an effective
GERIATRIC
antiarthritic
with
REASSURING SAFETY FACTORS

Effectiveness, dependability and reassuring Safety Factors make PABALATE-SF a logical choice for antiarthritic therapy in elderly patients—even when osteoporosis, hypertension, edema, peptic ulcer, cardiac damage, latent chronic infection and other common geriatric conditions are present. The potassium salts of PABALATE-SF cannot contribute to sodium retention...the enteric coating assures gastric tolerance...and clinical experience shows that this preparation does not precipitate the serious reactions often associated with corticosteroids or pyrazolone derivatives.

Side Effects: Occasionally, mild salicylism may occur, but it responds readily to adjustment of dosage. Precaution: In the presence of severe renal impairment, care should be taken to avoid accumulation of salicylate and PABA. Contraindicated: An hypersensitivity to any component.

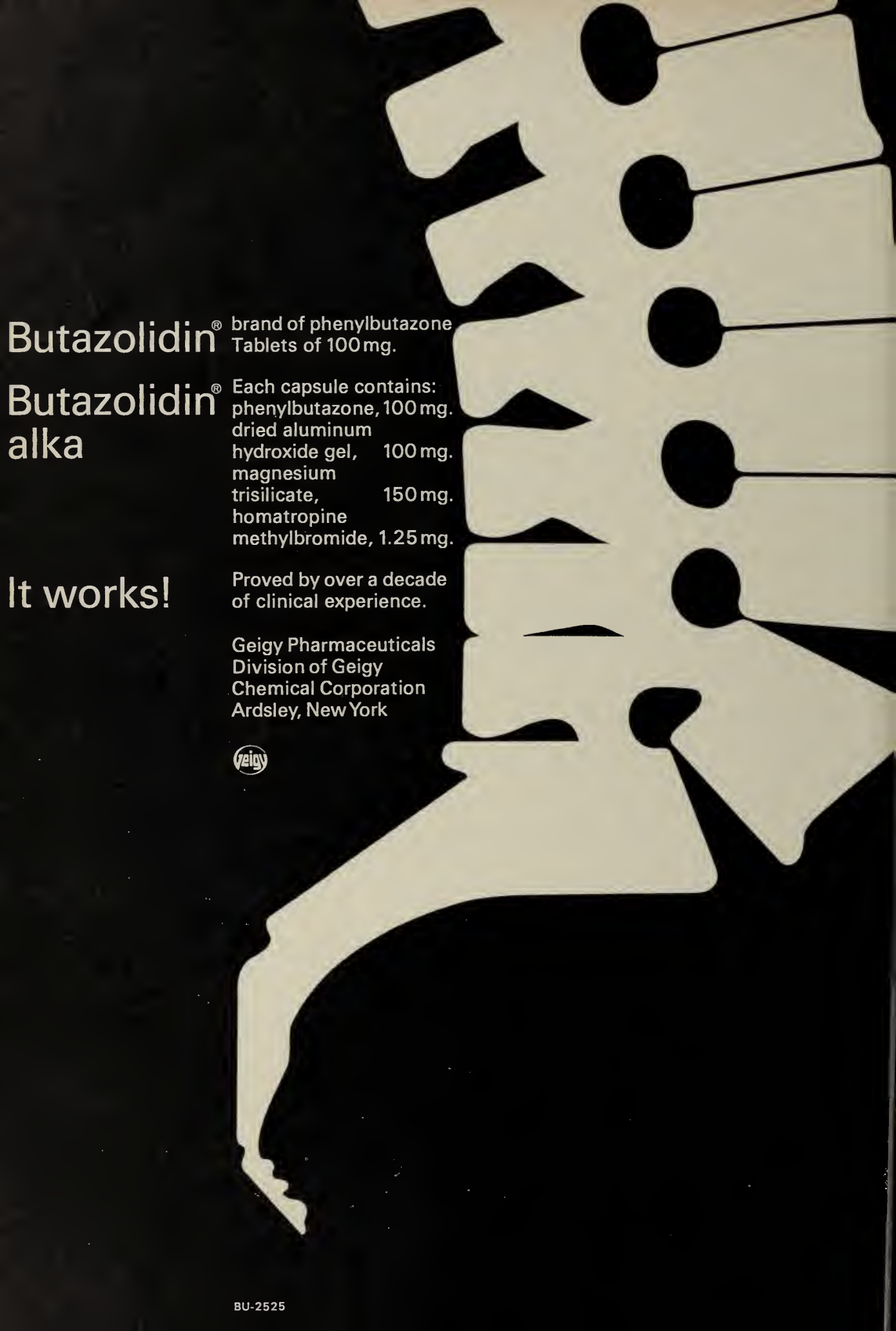
Also available: PABALATE—when sodium salts are permissible. PABALATE-HC—Pabalate-SF with hydrocortisone.

Pabalate-SF

A. H. ROBINS CO., INC., RICHMOND 20, VIRGINIA

In each persian-rose enteric-coated tablet: potassium salicylate 0.3 Gm., potassium para-aminobenzoate 0.3 Gm., ascorbic acid 50.0 mg.

—the new, convenient way to prescribe
PABALATE-SODIUM FREE



Butazolidin®

brand of phenylbutazone
Tablets of 100 mg.

Butazolidin® alka

Each capsule contains:
phenylbutazone, 100 mg.
dried aluminum hydroxide gel, 100 mg.
magnesium trisilicate, 150 mg.
homatropine methylbromide, 1.25 mg.

It works!

Proved by over a decade of clinical experience.

Geigy Pharmaceuticals
Division of Geigy
Chemical Corporation
Ardsley, New York

BU-2525



In Fractures: B and C vitamins are therapy

Stress formula vitamins are a key factor in bone and tissue regeneration. To meet the increased metabolic demands, STRESSCAPS offers therapeutic amounts of B and C vitamins as an aid to smoother convalescence and earlier rehabilitation. In fractures, as in many other conditions of physiologic stress, STRESSCAPS vitamins are therapy.

Each capsule contains:	
Vitamin B_1 (Thiamine Mononitrate)	10 mg.
Vitamin B_2 (Riboflavin)	10 mg.
Niacinamide	100 mg.
Vitamin C (Ascorbic Acid)	300 mg.
Vitamin B_6 (Pyridoxine HCl)	2 mg.
Vitamin B_{12} Crystalline	4 mcgm.
Calcium Pantothenate	20 mg.

Recommended intake: Adults, 1 capsule daily, for the treatment of vitamin deficiencies. Supplied in decorative "reminder" jars of 30 and 100; bottles of 500.

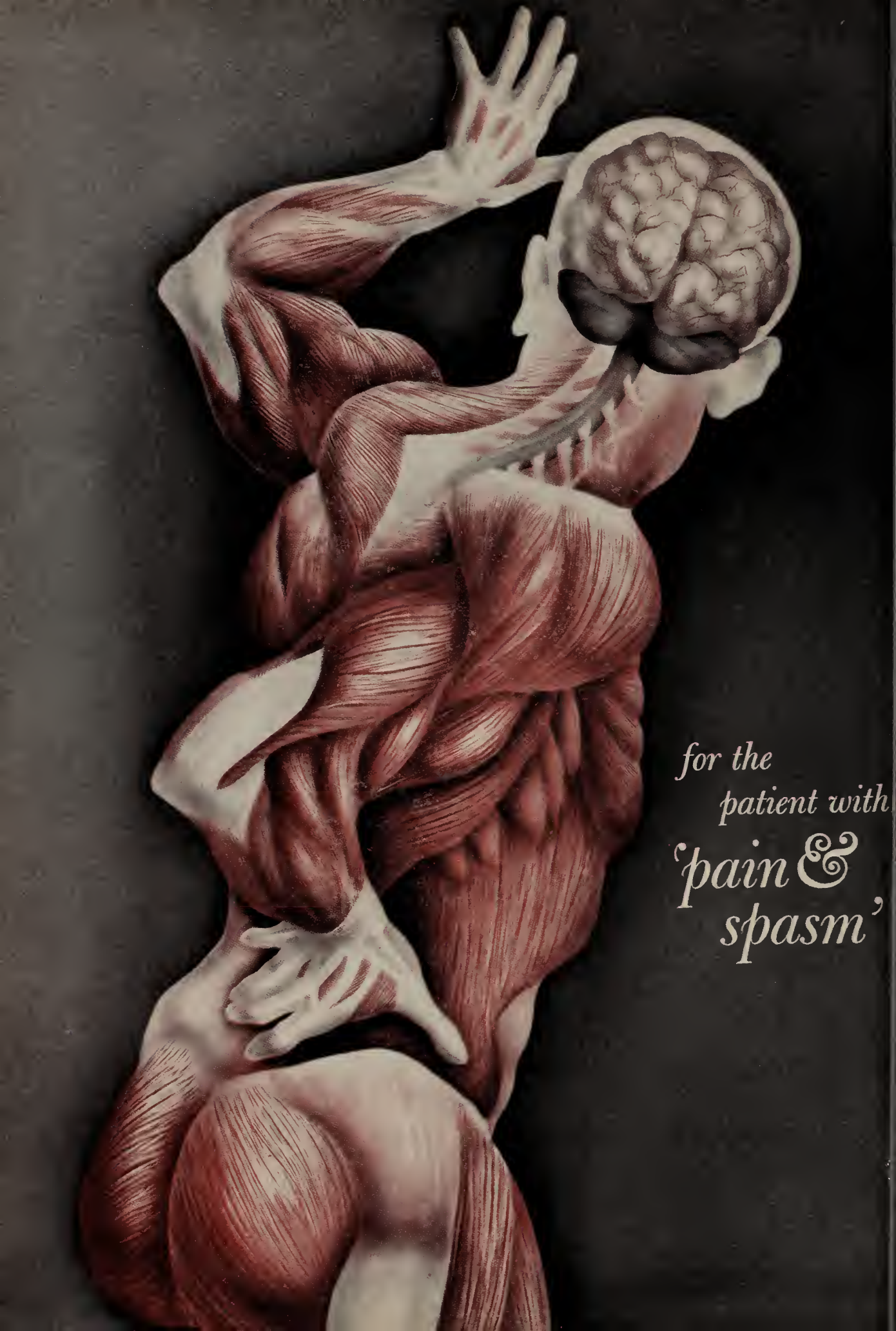
STRESSCAPS®

Stress Formula Vitamins Lederle

FOR PROFESSIONAL RECOMMENDATION ONLY

Lederle LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, N. Y.

7283-4


for the
patient with
'pain &
spasm'

pain *is almost invariably a presenting symptom in cases of skeletal muscle* *spasm*

In some instances, the pain subsides on relaxation of the muscles in spasm. In others, relaxant therapy alone fails to give adequate relief, and supplementary analgesia (and possibly sedation) are indispensable, as in cases of:

provocative pain, when muscle spasm is triggered by some painful underlying musculoskeletal defect.

residual pain, when relaxation of severe spasticity leaves a degree of myalgia that tends to reinvoke spasm.

severe pain, when the degree of pain is such as to cause persistence of symptoms in spite of relaxant therapy.

emotionally aggravated pain, when anxiety or agitation creates tension that thwarts the efficacy of both relaxant and analgesic medication.

In such cases, ROBAXISAL and ROBAXISAL-PH have proven highly effective in assuring decisive and comprehensive relief. The ROBAXISAL formula—of ROBAXIN (methocarbamol), the potent muscle relaxant, together with aspirin, the time-tested and proved analgesic—produces higher plasma salicylate levels than equivalent doses of aspirin alone, and serves effectively to control both spasm and pain. ROBAXISAL-PH's combination of ROBAXIN (methocarbamol) with the analgesic-sedative ingredients of the PHENAPHEN formula—including phenobarbital—helps additionally to ease apprehension.

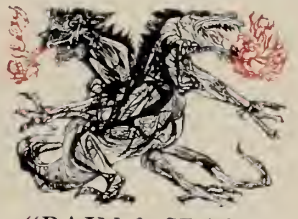
ROBAXISAL®

Robins

Each pink-and-white laminated Tablet contains:
ROBAXIN (methocarbamol, Robins) .....400 mg. Aspirin (5 gr.).....325 mg.
U.S. Pat. No. 2770649

ROBAXISAL®-PH

Each green-and-white laminated Tablet contains:
ROBAXIN .....400 mg. (methocarbamol, Robins)
Phenacetin (1½ gr.)....97 mg.
Aspirin (1¼ gr.).....81 mg.
Hyoscyamine sulfate 0.016 mg.
Phenobarbital (⅛ gr.)....8.1 mg.
(Warning: May be habit forming)



"PAIN & SPASM"
–a two-headed dragon!

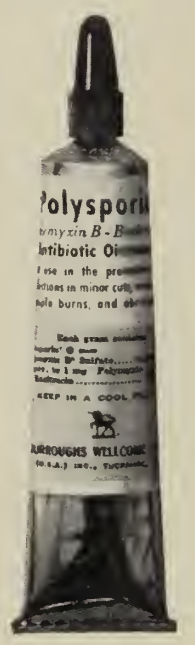
ROBAXISAL and ROBAXISAL-PH are indicated in strains and sprains, painful disorders of the back, "whiplash" injury, myositis, pain and spasm associated with arthritis, torticollis, and headache associated with muscular tension.

Side effects such as lightheadedness, slight drowsiness, dizziness and nausea may occur rarely in patients with intolerance to drugs, but they usually disappear on reduction of dosage.

Contraindicated for patients hypersensitive to any component of the formulations. There are no specific contraindications to methocarbamol, and untoward reactions are not to be expected.

A. H. ROBINS CO., INC., Richmond 20, Virginia

in treating topical infections, no need to sensitize the patient



USE 'POLYSPORIN'® brand POLYMYXIN B-BACITRACIN ANTIBIOTIC OINTMENT

broad-spectrum antibiotic therapy with minimum risk of sensitization

Caution: As with other antibiotic products, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs. **Supplied:** in ½ oz. and 1 oz. tubes.

Complete literature available on request from Professional Services Dept. PML.

BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, N.Y.

Reprint Price Schedule

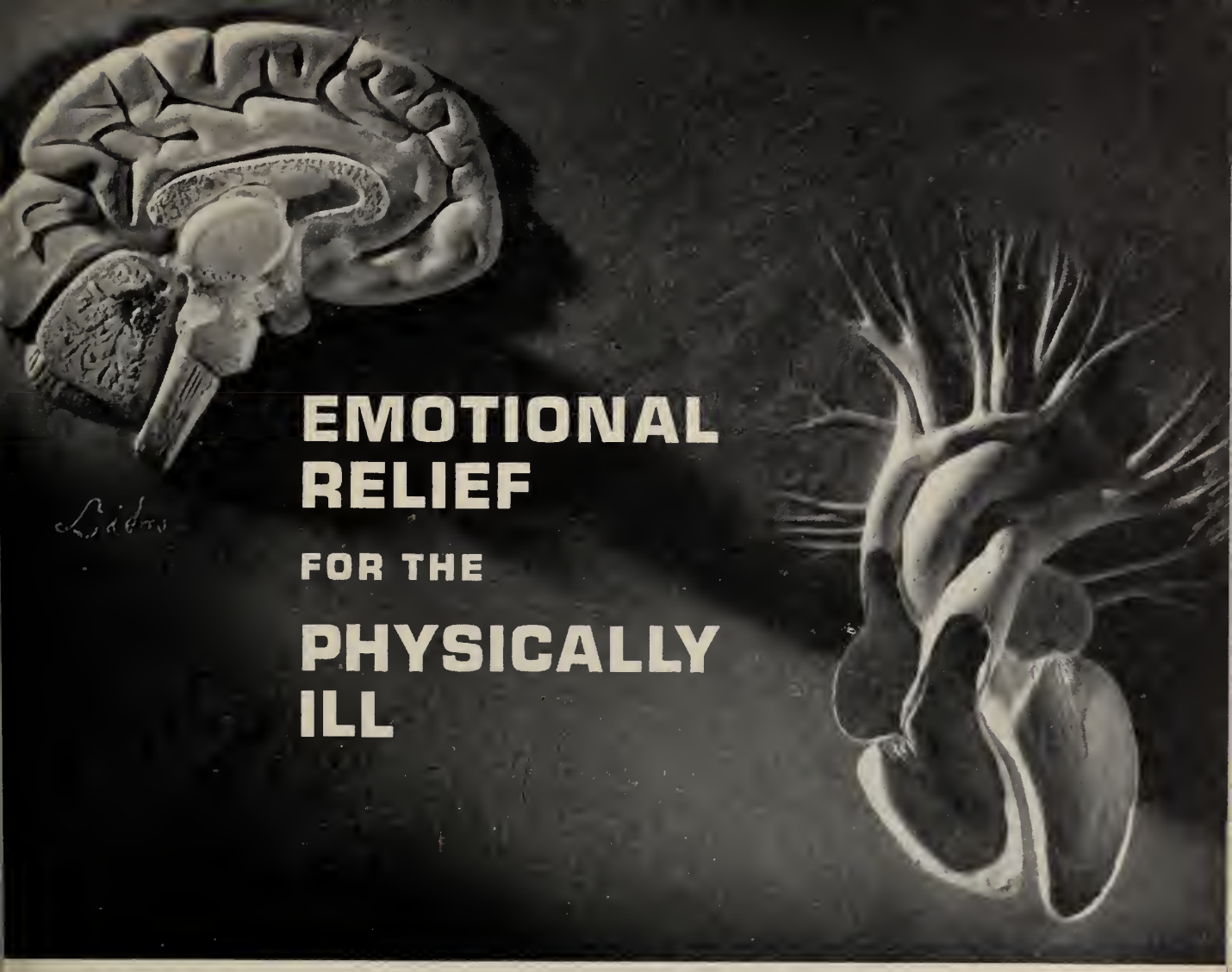
THE JOURNAL OF TENNESSEE MEDICAL ASSOCIATION

	100	200	300	400	500	600	700	800	900	1000	Add'l 1000
2 pages	12.80	14.15	15.60	17.30	17.65	18.00	18.55	19.50	20.70	21.85	12.00
4 pages	18.80	23.00	25.60	28.50	29.60	30.25	31.20	33.55	35.65	37.80	22.60
8 pages	36.80	41.60	46.15	51.00	52.30	53.00	54.45	57.85	61.50	64.90	35.00
12 pages	48.10	53.40	58.60	63.75	64.70	65.15	66.60	70.80	75.00	79.00	41.60
Envelopes 8¼x11¼	13.30	16.00	18.50	21.30	22.50	24.00	26.40	28.80	31.20	33.60	26.40

Reprints of articles in THE JOURNAL OF TENNESSEE MEDICAL ASSOCIATION are available at the following prices. Orders should be placed within 30 days following publication of the journal in which the article appears.

The above prices are for reprints supplied in the page size of THE JOURNAL OF TENNESSEE MEDICAL ASSOCIATION. If smaller or larger sizes are required, special prices must be obtained. Address

McQUIDDY PRINTING COMPANY NASHVILLE, TENNESSEE



RELIEVES ANXIETY, APPREHENSION AND TENSION...



All day long
. . . keeps the patient calm, and the mind clear.



All night too
. . . aids restful sleep, with no barbiturate hangover.

MEPROSPAN®-400

(MEPROBAMATE 400 MG. SUSTAINED RELEASE)

Simplified, convenient dosage for emotional relief.

Side effects: 'Meprospan' (meprobamate, sustained release) is remarkably free of untoward reactions. Daytime drowsiness has not been reported. Rare allergic or idiosyncratic reactions may occur, generally developing after 1-4 doses of the drug.

Contraindications: Previous allergic or idiosyncratic reactions to meprobamate contraindicate subsequent use.

Precautions: Should administration of meprobamate cause drowsiness or visual disturbances, the dose should be reduced. Operation of motor vehicles or machinery or other activity requiring alertness should be avoided if these symptoms are present. Effects of excessive alcohol may possibly be increased by meprobamate. Prescribe cautiously and in small quantities to patients with suicidal tendencies. Massive overdosage may produce lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction; withdraw gradually after prolonged use at high dosage.

Complete product information available in the product package, and to physicians upon request.

Usual adult dosage: One 400 mg. capsule or two 200 mg. capsules at breakfast; repeat with evening meal.

Supplied: 'Meprospan'-400 (meprobamate 400 mg.), 'Meprospan'-200 (meprobamate 200 mg.), each in sustained-release capsules. Both potencies in bottles of 30.

CME-760

WALLACE LABORATORIES *Cranbury, N. J.*

Who developed the first compound charcoal filter?

HERE'S THE ANSWER IN BLACK AND WHITE:



The first cigarette with a modern compound charcoal filter was introduced by The American Tobacco Company in 1958. Its name: Dual Filter Tareyton.

Behind the introduction of this first compound filter lay years of research and experimentation by American Tobacco scientists to produce a filter that would improve the taste and flavor of fine tobacco. This was a large order, but it was filled by the Dual Filter Tareyton compound filter.

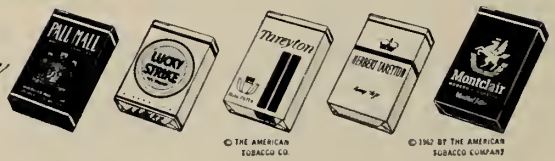
With an outer filter of white cellulose acetate and an inner filter of activated charcoal, this compound filter is just the right complement to Dual Filter Tareyton's quality tobaccos. Proof of its success may be seen in the exceptional loyalty Dual Filter Tareyton smokers have for their brand.

Developing and perfecting the first compound charcoal filter took many years. Maybe this proves something: our persistent dedication to maintaining—and ever improving—the high quality of our products.

For at The American Tobacco Company, QUALITY OF PRODUCT IS ESSENTIAL TO CONTINUING SUCCESS.

The American Tobacco Company

FIRST IN CIGARETTE RESEARCH

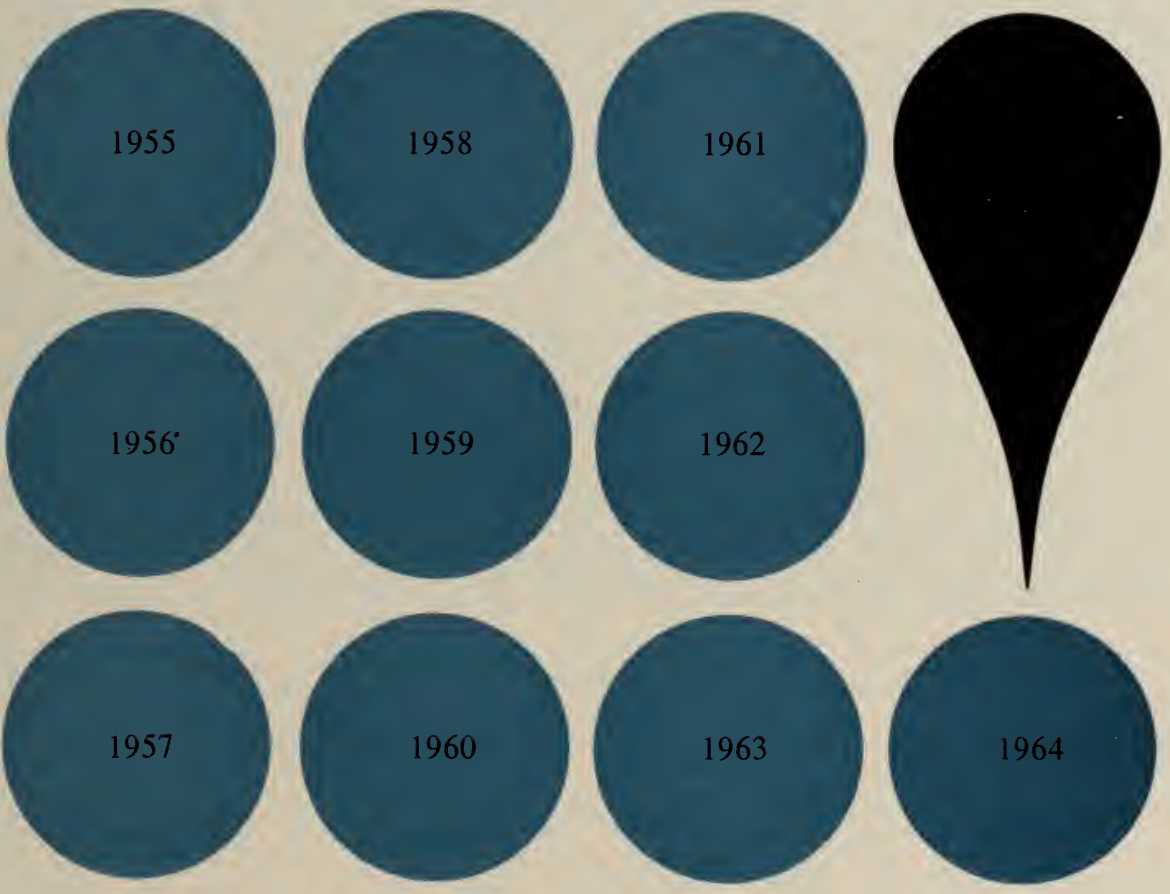


© THE AMERICAN TOBACCO CO.

© 1962 BY THE AMERICAN TOBACCO COMPANY

© A. T. Co.

The clear conclusion from 10 years' experience...



belongs in every practice

Miltown®
(meprobamate)

WALLACE LABORATORIES/Cranbury, N. J.

CM-2026



Whether you're a teacher correcting exams. A student cramming for them. A housewife cleaning up after the kids. Or a businessman working late at night. Whoever you are, things go better when you pause and refresh with ice-cold Coca-Cola.

Psychiatric Residencies for General Practitioners and Other Physicians in Practice for More Than Four Years

There is a position available in a three year, approved dynamically-oriented psychiatric residency program in a 500 bed, acute general hospital. Rotations through acute psychiatric receiving service, adult and child out-patient and in-patient services, and consultation service. Intensive supervision. Experience in both individual and group treatment. Active didactic program. Medical school affiliation and appointment.
Applications now being accepted for the academic year begining July 1, 1964. N.I.M.H. grants up to $12,000 per year for physicians who meet the requirements of this program. For further information write: Alex H. Kaplan, M.D., Director of Training Program; Department of Psychiatry; The Jewish Hospital of Saint Louis; 216 South Kingshighway Boulevard; Saint Louis, Missouri 63110.

Remember, Doctor—

It's been

Tafel Surgical Supply Co., Inc.

SINCE 1889

for

Drugs, Orthopedic, Surgical

Supplies & Equipment

1203 Church Street

Nashville, Tennessee



Outwardly calm...but what goes on inside?

Appearances on the outside do not necessarily suggest what goes on inside. This is particularly true of the ulcer patient, who may appear jolly and unruffled to his neighbors, but presents to you the classic symptoms: organic and functional disorders of the G.I. tract, associated with anxiety and tension.

Consider, when you see him next, the value of PATHILON® SEQUELS® with Phenobarbital, which provides sustained anticholinergic protection from spasm and pain in the target areas, as well as sustained phenobarbital action against triggering anxiety. The controlled release of the active ingredients in the SEQUELS® formulation means protective medication day and night.

Effective in peptic ulcer, intestinal colic, ileitis, esophageal spasm, spastic colon, alcohol-induced G.I. upsets, gastric hypermotility and anxiety neurosis with G.I. symptoms. Should be used as adjunct to other measures.

Side Effects (due to tridihexethyl chloride): dry mouth, blurring of vision, constipation.

Contraindications: urinary bladder neck obstruction; glaucoma; obstructive congenital anomalies of the gastrointestinal tract; pyloric obstruction; congenital megacolon; and stenosing gastric or duodenal ulcer with significant gastric retention.

Also available, without phenobarbital, as PATHILON® Tridihexethyl chloride SEQUELS® 75 mg.

Pathilon® Sequels® with Phenobarbital Sustained Release Capsules

Each capsule contains: Tridihexethyl chloride, 75 mg., and phenobarbital, 45 mg.

LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, New York

Lederle

279-4

RECOGNIZE THIS PATIENT?



"The arthritis doesn't get any better... I can't get out. I never see anybody. It's awful to be sick... I was always so active."

When you recognize depression and anxiety related to an organic condition

—add 'Deprol' to your therapy

Typical organic conditions in which 'Deprol' helps control related depression and anxiety:

cardiovascular disorders ■ arthritis ■ cancer ■ menopause ■ alcoholism ■ obesity ■ asthma, hay fever and related allergies ■ chronic infectious diseases ■ dermatoses ■ G.I. disorders, and many other debilitating or life-threatening illnesses

Advantages of 'Deprol'

1. By relieving both depression and anxiety, 'Deprol' lifts the mood of the depressed patient without the agitation and "jitters" that often accompany "energizer" therapy alone.
2. 'Deprol' relaxes physical tensions, restores normal sleep and revives interest in food.
3. 'Deprol' acts rapidly—patients often respond within a week or two.
4. 'Deprol' is compatible with drugs used to treat co-existing organic conditions.
5. 'Deprol' is relatively nontoxic and free of side effects.

Deprol®

meprobamate 400 mg. + benactyzine hydrochloride 1 mg.

Side effects: Slight drowsiness and, rarely, allergic or idiosyncratic reactions, due to meprobamate, and occasional dizziness or feeling of depersonalization in higher dosage, due to benactyzine, may occur. **Contraindications:** Previous allergic or idiosyncratic reactions to meprobamate contraindicate subsequent use of meprobamate or meprobamate-containing drugs. **Precautions:** Should administration of meprobamate cause drowsiness, the dose should be reduced. Operation of motor vehicles or machinery or other activity requiring alertness should be avoided if these symptoms are present. Effects of excessive alcohol may possibly be increased by meprobamate. Although suicides with 'Deprol' have not been reported, prescribe cautiously and in small quantities to patients with suicidal tendencies. Massive overdosage of meprobamate may produce lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse. Even though it has not been reported with 'Deprol', consider the possibility of dependence, particularly in patients with history of drug or alcohol addiction; withdraw gradually after prolonged use at high dosage. *Complete product information available in the product package, and to physicians on request.*

Usual adult dosage: 1 tablet t.i.d. or q.i.d. May be increased gradually, as needed, to 6 tablets daily. With establishment of relief, may be gradually reduced to maintenance levels. **Supplied:** Light-pink, scored tablets Bottles of 50.

WALLACE LABORATORIES / *Cranbury, N. J.*

CO-801



TAKE 5

...and find that a TB screening test has never been quite so easy

SWAB THE ARM— UNCAP A TINE TEST— PRESS—DISCARD THAT'S ALL THERE IS TO IT.

Comparable to the Mantoux in accuracy and sensitivity, the TUBERCULIN, TINE TEST is now available in plastic-capped units uniquely suited to general practice needs. They are so simple to use that you can test every patient with ease. Since it requires no refrigeration, the new package of five Tine Test units can stand on any convenient table in your examining rooms, ready for routine use. Side effects are possible but very rare: vesiculation, ulceration or necrosis at test site. Contraindications, none; but use with caution in active tuberculosis.

available as the new individually-capped unit, boxes of 5, or in cartons of 25

TUBERCULIN, TINE TEST

(Rosenthal) Lederle

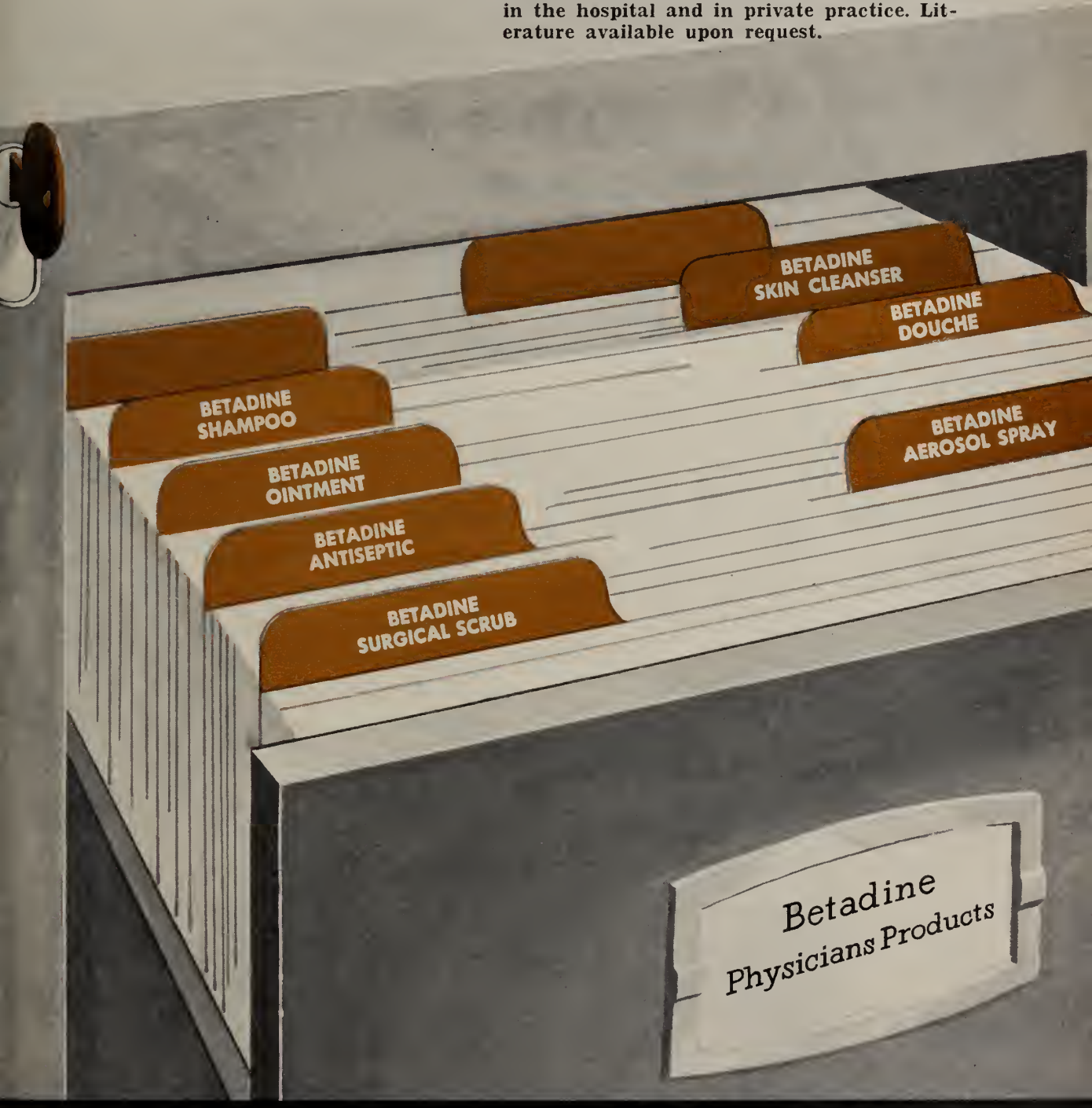
LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, N. Y. 7899-4 Lederle

Betadine®
Povidone-Iodine Products
unlock a wide range of usefulness

Betadine Products, in all seven dosage forms, contain povidone-iodine, a complex of polyvinylpyrrolidone and iodine, providing all the germicidal properties of elemental iodine . . . yet Betadine (povidone-iodine) is nonirritating, nonsensitizing, and nontoxic to skin or mucosa.

Betadine Products are effective in preventing and treating a variety of infections frequently encountered in the practice of otolaryngology, orthopedics and orthopedic surgery, obstetrics and gynecology, oral surgery, pediatrics, surgery and dermatology.

The clinical results reported under various conditions of use make Betadine (povidone-iodine) preparations valuable adjuncts both in the hospital and in private practice. Literature available upon request.



PHYSICIANS PRODUCTS CO., INC.
PETERSBURG, VIRGINIA

An open letter on a new concept in cigarette filtration from the makers of new LARK cigarettes

DEAR DOCTOR: In the recent report of the Surgeon General's Advisory Committee on Smoking and Health, attention was drawn to the inhibitory effect of cigarette smoke on respiratory cilia. On page 34, the Report states: "Components of the gas phase of cigarette smoke have been shown to produce various undesirable effects on test animals or organs. One of these effects is suppression of ciliary transport activity, an important cleaning function in the trachea and bronchi (Chapter 6, p. 61 and Chapter 10, pp. 267-270)."

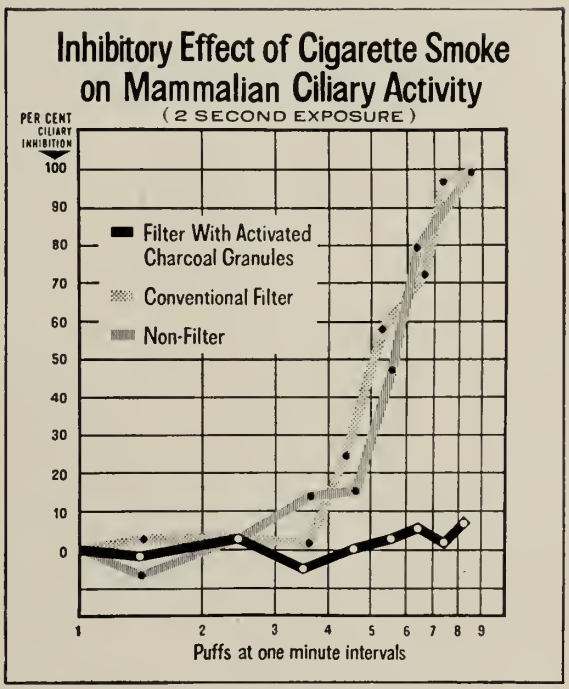
The Report also notes that there is a cigarette filter containing special charcoal granules which reduces certain gases which inhibit the activity of mammalian respiratory cilia. On page 61 of the Report it states: "Activated carbons differ markedly in their adsorption characteristics. Carbon filters previously employed in cigarettes do not have the specific power to scrub the gas phase. It has been reported that a filter containing special carbon granules removes gaseous constituents which depress ciliary activity (28)." The reference cited is "New England Journal of Medicine" (Kensler, C. J. and Battista, S. P., *269:* 1161-1166, November 28, 1963).

In 1954, Liggett & Myers Tobacco Company began a broadly based program of biological research on tobacco smoke which has been conducted in the Life Sciences Division of Arthur D. Little, Inc., Cambridge, Mass. In recent years, this research has centered on the gas phase of cigarette smoke, and the development of a specially treated charcoal-granule filter. This filter materially reduces the gases in cigarette smoke which contribute to the inhibition of the activity of mammalian

respiratory cilia in *in vitro* experiments. (see chart.)

Dr. Kensler points out in his paper referred to above: "Although it is recognized that these *in vitro* findings may not be directly extrapolated to the effects of cigarette smoke on human pulmonary tissue the use of the charcoal-granule filter will obviously reduce the level of exposure of the non-ciliated as well as ciliated bronchial and alveolar cells to potentially harmful smoke components."

The specially treated charcoal-granule filter discussed in the Kensler and Battista paper was the prototype of the one which is now available to the public on Lark cigarettes. Since some of your patients may have heard of this filter through the lay press, and may inquire about its basis in science, we believe you may wish to have the information at hand.



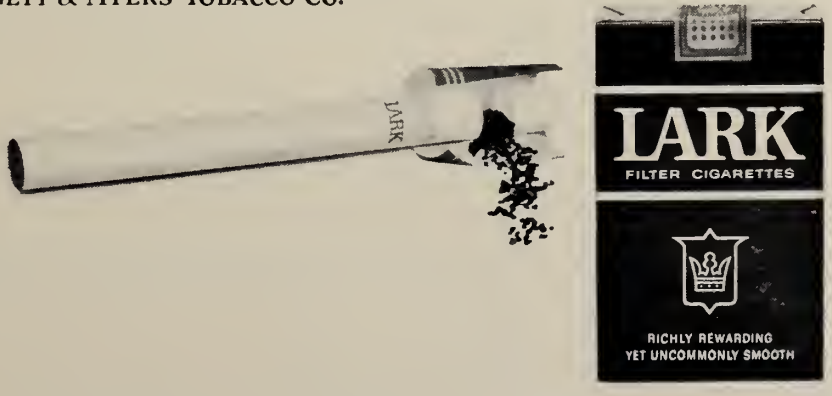
(Data from figure 6, page 1165, "New England Journal of Medicine," November 28, 1963)

Chart shows inhibition of the mammalian ciliary activity by the irritating gases in cigarette smoke:

1. The screened lines represent conventional filter and non-filter cigarettes and show how they produced 50% ciliary inhibition after 5 to 6 puffs and 100% inhibition after 7 to 8 puffs.

2. On the other hand, the filter with activated charcoal granules, represented by the solid black line, produced no significant inhibition (less than 10%) when the whole cigarette (8 puffs) was smoked.

LIGGETT & MYERS TOBACCO CO.





Out-Patient Clinic and Offices

HILL CREST SANITARIUM

Established in 1925

FOR NERVOUS AND MENTAL DISEASES
AND ADDICTION PROBLEMS

James A. Becton, M.D.
P. O. Box 2896, Woodlawn Station, Birmingham 6, Ala.

James K. Ward, M.D.
Phones WOrth 1-1151



A SURGICAL INSTRUMENT OIL

Scientifically Developed for the

MEDICAL PROFESSION

Apply as indicated; a few drops especially in locks and serrations of instruments, or other delicate mechanisms. Leave a thin film over the entire instrument to prevent rust in disuse or storage. This highly refined clear instrument oil will not clog, gum or turn rancid. Non-corrosive.

4-oz. can 75c
Pt. bottle with dispensing can . . . $2.50
Qt. bottle with dispensing can $4.00

Plus post.

White Surgical Supply Co.

SURGICAL SUPPLIES & ACCESSORIES

515 West Church Ave. Knoxville 7, Tennessee

Telephone 3-1186

Gyne-Cytology Laboratory, Inc.

M. Wm. Rubenstein, M.D.

(PAPANICOLAOU METHOD)

RAPID SERVICE
Mailing Kits On Request

Suite 422 - 636 Church Street
EVANSTON, ILLINOIS 60201

WANTED:

Staff physicians needed in Internal Medicine, General Medicine, and Psychiatry at VA Hospital, Tuskegee, Alabama, immediately. Salaries up to $19,785, depending on qualifications. Excellent fringe benefits. For information and applications, write J. W. Giles, M.D., Hospital Director.



FOR YOUR ELDERLY ARTHRITIC PATIENTS...

effective
GERIATRIC
arthritic
aid:

REASSURING SAFETY FACTORS

Effectiveness, dependability and reassuring Safety Factors make PABALATE-SF a logical choice for antiarthritic therapy in elderly patients—even when osteoporosis, hypertension, edema, peptic ulcer, cardiac damage, latent chronic infection and other common geriatric conditions are present. The potassium salts of PABALATE-SF cannot contribute to sodium retention...the enteric coating assures gastric tolerance...and clinical experience shows that this preparation does not precipitate the serious reactions often associated with corticosteroids or pyrazolone derivatives.

Side Effects: Occasionally, mild salicylism may occur, but it responds readily to adjustment of dosage. Precaution: In the presence of severe renal impairment, care should be taken to avoid accumulation of salicylate and PABA. Contraindicated: An hypersensitivity to any component.

Also available: PABALATE—when sodium salts are permissible. PABALATE-HC—Pabalate-SF with hydrocortisone.

Pabalate-SF

In each persian-rose enteric-coated tablet: potassium salicylate 0.3 Gm., potassium para-aminobenzoate 0.3 Gm., ascorbic acid 50.0 mg.

—the new, convenient way to prescribe
PABALATE-SODIUM FREE

A. H. ROBINS CO., INC., RICHMOND 20, VIRGINIA



"Leakers" are ampoules with minute imperfections in the seal. You can't readily see the flaw, and often it's so small that liquids won't even drip through; but microscopic contaminants can slip in to render the contents nonsterile and potentially dangerous. ▪ Detecting "leakers" is the job of the vat and the blue dye. ▪ Sealed Lilly ampoules are placed in baskets, submerged in a vat containing methylene blue, and subjected to a vacuum. If there is an imperfect ampoule in the lot, the liquid is forced out. When the vacuum is released, the blue dye rushes in. ▪ With dye as the spy, elusive "leakers" are quickly spotted and rejected . . . another of the many controls that add immeasurably to the quality of the finished product.

Eli Lilly and Company · Indianapolis 6, Indiana, U.S.A.

Lilly

400372

Journal of the Tennessee Medical Association

OWNED AND PUBLISHED BY THE ASSOCIATION

Volume 57 MAY, 1964 No. 5

THE TENNESSEE CONGRESS ON MENTAL ILLNESS AND HEALTH

This *first* Tennessee Congress on Mental Illness and Health, was one of the early state Congresses to be organized and implemented in accord with the hopes of the First National Congress on Mental Illness and Health called by the American Medical Association in 1962. Thus, the Tennessee Medical Association again was out in front in meeting the medical problems of changing times.

Thanks to its Committee on Mental Health and to its officers who supported both in principle and financially the proposed program, TMA joined Tennessee's Psychiatric Association, Mental Health Association and TMA's Woman's Auxiliary in a successful demonstration of the public's interests in the problems that beset us. An attendance of 438, including 92 physicians, representatives of universities, colleges, public schools and hospitals, as well as representatives of the legal and nursing professions, of the Departments of Public Welfare, Mental Health, Public Health and the Ministerial Association, point to the excellent planning of the Steering Committee for the Congress.

The Board of Trustees of TMA supports the publication of the following papers which were presented at the Congress held November 13, 14, 1963.

Working Together For Community Mental Health Services*

ROBERT S. GARBER, M.D.,† Belle Mead, N. J.

As a member of Dr. Frank Luton's "team," I am delighted by this opportunity to visit Tennessee and to join this distinguished group of speakers in addressing the First Tennessee Congress on Mental Illness and Health.

I am sure you feel, as I do, that all of us can take pride in the great advances made in recent years in the treatment of the mentally ill. I am sure you will agree, also, that much remains to be done if we are to continue to make progress.

Mr. Mike Gorman, the Executive Director of the National Committee Against Mental Illness, at Miami last December, described one of our most urgent needs as "a fresh approach to mental illness based upon a wide range of treatment services in the community designed to keep as many persons as possible out of state mental hospitals."

I want to discuss that "fresh approach" in three stages. First, I would like to review briefly the history of the social and political factors that brought about the development of our present system of state hospitals. Second, I want to point out some of the reasons why hospitalization is seldom the ideal treatment, and how patients usually benefit from remaining in familiar surroundings. And in conclusion, I want to mention some of the facilities and services that are needed for an adequate program of treatment at the community level,

*Read at the First Tennessee Congress on Mental Illness and Health, November 13, 1963, Nashville, Tenn.

†Speaker, Assembly of District Branches, American Psychiatric Association. From the Carrier Clinic, Belle Mead, N. J., and the Department of Psychiatry, Temple University Medical School, Philadelphia, Pa.

as well as some recommendations regarding the role each of you can fulfill.

Now, the historical background. As Albert Deutsch recalls in his book on "Mental Illness in America," until about 1850, the care of the mentally ill was a local responsibility. While there were a few praiseworthy exceptions, mental illness for the most part was handled through a system of local almshouses or institutions for the poor. Neglect, brutality and exploitation of patients were the rule.

We are speaking today in the shadow of your state capital built in 1844, the same year that marked the beginning of our American Psychiatric Association (known then as the American Association of Medical Superintendents of Institutions for the Insane).

In the Eighteen-Forties a number of mental hospitals were visited by a Boston spinster who took notes on what she saw. She was Dorothea Lynde Dix, a schoolteacher and a writer of devotional books whose "Conversations on Common Things" went through 60 editions.

When her notebooks were filled, Miss Dix visited many of the state legislatures and told lawmakers what she had seen. Listeners were appalled as she described living conditions and treatment unfit for animals, much less for human beings. An outcry went up for reform of the mental hospitals. I understand that your first state hospital opened in 1852 after a visit from Miss Dix in 1847 when she memorialized the legislature regarding her observations.

Miss Dix went on to other states and other countries. Before her death in 1887, she had been directly responsible for the founding of at least 32 mental hospitals, including two in Japan. She lobbied in Washington for six years until Congress appropriated funds to build St. Elizabeth's Hospital.

As a result of Miss Dix's crusading efforts, responsibility for the care and treatment of the mentally ill became more and more a state rather than a community responsibility. Many communities, especially the smaller ones, did not have adequate resources for treating mental illness. The trend toward a statewide mental health system begun by the Dix reforms has continued to the present day.

As the system developed, a typical state mental hospital began to evolve—a large, self-contained, self-sufficient institution, located in a rural area, often having its own dairy and growing most of its own food.

State mental hospitals tended to be large as a matter of economy and administrative convenience. All else being equal, it is cheaper and easier to run one large hospital than several small ones. They were built in the country for several reasons. One was that land was cheaper there. Another was the belief that mental patients would benefit from farm life and country air. Yet the primary reason—whether openly admitted or not—was that it kept mental patients out of the way.

Since the medieval idea persisted that mental illness was hopeless and incurable, the main function of mental hospitals was to keep patients locked up. When people were sent to such institutions, they were said to be "put away." In the 19th century, psychiatrists were called "alienists" and truly, they, their interests and their patients were thoroughly alienated from the life of the community.

Here we are reminded of the point stressed in "Action For Mental Health," the report of the Joint Commission on Mental Health and Illness. The tendency to "put away" the mentally ill is as old as history. They disturb us; we would rather not have them around. One of the greatest problems in dealing with mental illness is to create understanding of, and sympathy for the mental patient's condition. A sweet-faced child wearing braces makes an appealing March of Dimes poster; but almost every impression the uninformed have about the mental patient is unlovable. He is often hostile or suspicious. He may think people are following him or talking about him behind his back. He is often stubborn and uncooperative, even with those who are trying to help him. His personal appearance may be as disordered as his psyche. It is small wonder that historically our tendency has been to deport mental patients as "undesirable aliens" to a mental hospital somewhere out in the country.

Today, as you know, our thinking about the mental patient has done an about face. A hundred years ago Dorothea Dix and other reformers were trying to get patients into hospitals. Now we are trying to get them out. And that brings me to my second point, that hospitalization is not the best answer for all types of mental illness.

For one thing, the problem has become too big and complex for our mental hospitals to cope with unaided. Most of our states have gone through a cycle something like this: As the first state mental hospital became overcrowded, a second was built. When that was inadequate, a third was built, and so on. With the growth of our population, our mental hospital population kept increasing too. Except for building more and more hospitals, there seemed to be no solution to the problem.

Overcrowding also meant too many patients, not enough staff, and too little money for adequate treatment. Inevitably, conditions deteriorated. Early in this century Clifford Beers shocked the nation with his description of hospitals in which he had been a patient. Mr. Gorman has recorded conditions he encountered as a newspaper reporter in Oklahoma and other states. Mr. Albert Duetsch, a writer and medical historian, visited more than two dozen state mental hospitals in 1946 and 1947, and recorded these findings very vividly in his publication "The Shame of the States."

Dr. William G. Menninger pointed out that until quite recently mental hospitals were "human warehouses mostly," and that 60% of patients admitted had no chance of ever getting out.

Conditions in some of our mental hospitals were not favorable for recovery. Often the uninitiated turned pale when they faced the sights and sounds of a disturbed ward. It was small wonder that many patients, shocked by their new surroundings, grew markedly worse than when first admitted.

On the other hand it was possible to adjust to the hospital all too well. For some patients the hospital became a haven they did not want to leave. By protecting them from the tensions and anxieties that had triggered their illness, the hospital removed the inducement to struggle back toward recovery. The longer they remained hospitalized the better they liked it. Physicians have been in general agreement for many years that the sooner a patient leaves the hospital, the better his chances are of getting well.

The ultimate goal of all psychotherapy is to restore the patient to his place as a self-sufficient, functioning member of the community. Hospitalization, a rather drastic step, breaks his ties with his surroundings. If he is to rejoin the community he will have to pick up the threads later on.

Today we are beginning to ask ourselves whether it would not be better to leave the threads unbroken in the first place—treating patients whenever possible in the surroundings of their community. Certainly we should not hospitalize everyone who has a problem, since people sometimes only need some help over a temporary crisis. We may hospitalize patients only because no better alternative is available.

As one physician recently observed, "The whole idea of a hospital needs thorough inspection. It's worked, it's served some social need—so has the penal system—but it needs a lot of overhauling and a lot of its time-honored conceptions challenged."

Today we are doing just that. We are challenging time-honored conceptions, and one reason for doing so is the revolution in the treatment of mental illness since the mid-fifties as the result of the psychotropic drugs, or "tranquilizers."

You may recall that in 1956, the first year in which tranquilizers were used on a large scale, the population of our mental hospitals declined for the first time in history. Until then it had been growing at a rate twice as fast as that of our population as a whole.

The tranquilizers, of course, are not a miraculous cure-all, nor have they made psychiatrists superfluous. However, they have given physicians, for the first time in history, a specific for the treatment of mental illness. By calming disturbed patients they have lessened the need for restraint and have made mental hospitals more orderly and cheerful. Furthermore, they have opened up a vast range of possibilities in the treatment of mental illness. I want to discuss some of these possibilities as my third point.

I have already said that it is best to get patients out of the hospital as quickly as possible, and that it is even better not to hospitalize them in the first place. But the solution is not simply to discharge them and send them home. We found that out by the hard way in the last public psychiatric facility with which I was associated. Our new administration undertook to classify every patient in the hospital. Since there were a number who were not sufficiently emotionally ill to warrant hospitalization, we urged their families or relatives to take them back, or we placed them in foster homes. The result in every instance was a dismal failure! We had failed to take into account that these patients had been isolated so long in an artificial environment that it was necessary to help them relearn some of the things they had forgotten about life outside.

We have come to appreciate that what we need are community-centered facilities able to treat the patient in the community and thereby disrupt his normal life as little as possible. We need psychiatric clinics and precare centers to treat mental illness before it becomes severe enough to require hospitalization. We need hospital facilities, as units in general hospitals or as private psychiatric hospitals, rather than far away "human warehouses." We need after-care centers to counsel released mental patients, to see that they continue their prescribed medication and to advise them about jobs and other personal problems. We need day hospitals and night hospitals for patients who are able to go out to jobs on a trial basis, yet are not sufficiently recovered to be entirely on their own. We need "halfway houses" to bridge the transition from hospital to community life. We need research facilities centered in our universities, medical schools and teaching hospitals, where we can add to our scientific knowledge about mental illness. We need physicians to take advantage of the many postgraduate programs available today to develop awareness of the many opportunities in which their skills can be utilized further. (May I direct your attention to Dr. Sheeley's paper elsewhere on your program.)

Let us take a moment to define a community mental health center. No better definition could be found than that offered in the message from the President of the United States to the 88th Congress on the subject of *mental illness and mental retardation.* "While the essential concept of the comprehensive community mental health center is new, the separate elements which would be combined in it are presently found in many communities;—diagnostic and evaluation services, emergency psychiatric units, outpatient services, inpatient services, day and night care, foster-home care, rehabilitation, consultation services to other community agencies, and mental health information and education."

You might pose the question, what does this mean to you on the local level? Does it mean that you should disregard the psychiatric facilities you already have? Does it mean that you should overlook the specially designed facilities already established? To the contrary, the important thing in the community mental health center is to coordinate the services required by the community. Do not think of the center as just another new building. Do not think of it as just another facility in a space or area not presently occupied, but rather look upon it as the development and focus of community resources needed to provide for all aspects of mental health care. This would mean that in many instances additional services and facilities could be added in varying degrees and stages to those already existent, in order to complete the comprehensive program.

The important thing is that these centers should be located in the patient's own environment—in his own community. Thus, the center would make possible a better understanding of the individual's needs,—i.e., a more cordial atmosphere for his recovery and a continuum of treatment. As his needs change the patient could move without delay or difficulty to different services—from diagnosis, to treatment, to rehabilitation—without having to transfer to other institutions located in other communities.

As noted in the President's message, psychiatry needs to divert the problem of mental health back into the main stream of medicine. In accomplishing this, the men-

tal health center will incorporate the direct participation and cooperation of all private physicians (including general practitioners, psychiatrists, and other medical specialists) in its program. Thus, it will provide treatment privileges for the physicians in a facility immediately available for the care of their patients on an in- or outpatient basis. Thereby, the family physician will look upon his psychiatrist colleague as a skilled and available consultant, the role of a treatment resource for complicated, difficult and puzzling cases.*

A visionary idea? Not at all. Every one of the facilities named has been tried out in a number of places and has proved well worth the effort.

The value of an after-care program, for example, has been established beyond doubt. A New York City study shows that follow-up reduced the mental patient's relapse rate from 38% to 14 per cent. In Maryland it was found that while 73% of untreated discharged patients relapsed, only 9% of those treated did so.

Five states—Colorado, Kentucky, Michigan, Pennsylvania, and Virginia—recently participated in a ten-month study of after-care for 600 released mental patients. For the five states as a whole, only 14.6% of patients receiving after-care required readmission to mental hospitals, compared to 35.1% for the untreated control group. The study suggests that it is reasonable to expect an after-care program to cut readmissions in half, or better.

After-care also results in impressive savings of health funds, since it is possible to maintain a patient in after-care for about one-tenth the cost of hospitalization. In Virginia, the cost per patient per day of the after-care program was 33¢ compared to $3.50 for hospitalization. In Michigan, after-care cost 57¢, hospitalization $5.00 per day.

Let us now look at the State of Georgia where, in 1960, the State Department of Mental Health established four psychiatric units in general hospitals of four major cities. Reports indicate that in two years they treated 1800 patients from 151 different counties at a cost of approximately $30.00 to $35.00 per diem, or at an average cost of $1,000 per patient. This program has already reduced the admission rate to Georgia's only state hospital by 7 per cent. Furthermore, one-fourth of the 1800 patients who had been unemployed when they came to the clinics are all now actively and gainfully employed.

In California, San Mateo County has established a community mental health center which has been operating for the past five years. It has reduced admissions to the nearby state hopsital by 30%, while surrounding counties have had an increased admission rate to the state hospitals by 30 per cent.

Though these are heartening figures it is important to keep them in perspective, otherwise state legislatures will be heard to say, "In one breath you tell how much you are saving through after-care, and in the next breath you ask for a larger mental health appropriation. What gives?"

The answer, of course, is that our mentally ill are increasing in number, just as our population is increasing. In addition, the strides we have made in the early recognition of mental illness have encouraged people to accept early treatment. Therefore, we are receiving more and more patients for treatment, but are also treating more patients successfully and returning them to the community. The net result is a decrease in the population of mental hospitals. By after-care and related programs, we are able to cope with problems which otherwise might be hopelessly out of hand.

The great advantage of after-care clinics and similar community-related facilities, is that they can be tailored to suit local resources and requirements. In one Kentucky mountain region, the after-care program is carried out by a psychiatrist who travels with his assistants in a station wagon. For a sparsely settled region with little public transportation, this is probably the most efficient way of getting around. In a traffic-choked metropolis like New York City this would be impractical.

*One thing should be spelled out clearly. The mere building and operation of a comprehensive mental health center will not eliminate mental disease in *your* community or in any other. Nor will the mental hospitals in your neighborhood be quickly emptied. There always has been mental disease and no doubt there always will be.

The "Sun City" communities being built for retired couples in Arizona and Southern California make no provision for schools, since the presence of children is discouraged except for brief visits. Obviously, in such a community adolescent behaviour problems will be negligible, while geriatric problems will loom large.

Every community has its own particular needs and resources, and no one facility is suited to all conditions. I have pointed out how, in an earlier day, state mental hospitals often followed the same standardized design. They tended to become ossified—to develop institutional hardening of the arteries. Today the trend is toward smaller and more flexible facilities, community-centered and community-oriented, and able to draw on existing community services as well as their own.

The ideal community mental health center will be a facility for treating mental illness and a good deal more. It requires a closely-coordinated network, integrating all the special facilities we have previously mentioned. It will work closely with Welfare and Family Service Agencies in coping with such problems as a family's loss of its wage earner because of mental illness. It will cooperate with police, judges, lawyers, and others who come in contact with disturbed persons. It will call for assistance from physicians and clergymen who are often the first to notice symptoms of mental illness. Above all, it will try to create in the community a sympathetic climate for the mentally ill, and refute the idea that they are aliens who should be "put away."

Let me repeat. There is nothing radically new or experimental in the treatment of mental patients in the community. Treatment in homes or home-like institutions is a practice of long standing in Europe. In this country, successful experiments in community treatment were made at Waverly, Massachusetts, and Vineland, N. J. as early as 1915. At about the same time, Dr. Charles Bernstein, of the Rome New York State School began boarding out in the community selected groups of mental patients under his careful supervision. The plan was so successful that it became regular practice in that institution.

The great barrier to community treatment is the lack of public understanding and sympathy. The public, as we all know, tends to have exaggerated ideas about mental illness and the mentally ill. When a former mental patient goes berserk with an ax, it always seems to make bigger newspaper headlines than an ax murder committed by someone who is technically "sane." But as a matter of cold statistical fact, a New York State study of 10,000 former mental patients showed that the rate for arrests of ex-patients was far lower than for the general population. As a rule the ex-patient is not a menace to anyone but himself.

If you will examine your program carefully, you will find that the Committee has planned a fine array of presentations. The round table discussions are devised to provide for the specific interests of all in this audience today. I sincerely hope you attend those of primary interest to you.

Now let me summarize my remarks: Our system of state mental hospitals evolved in response to an urgent need for more humane treatment of the mentally ill. Our hospitals have performed a public service and performed it well. But our increasing knowledge about mental illness on the one hand, and the increasing scope and complexity of the problem on the other, have brought about a need for more flexible, community-centered facilities which are able to cope with mental illness at the community level and are geared to provide continuity of care.

Would such a program be costly? Of course it would. Can we afford it? I think that question was well answered by Mr. Gorman when he said:

"In terms of our gross national productivity, we can well afford these additional expenditures. What we *cannot* afford is higher unemployment, juvenile delinquency, inadequately financed schools and inferior health services."

This is the problem. We can solve it if we go at it with a will. Let us do it. Let us bring the "aliens" back home.

I thank you for the privilege of being your guest this afternoon.

Cooperative Action For Mental Health*

PHILIP E. RYAN, M.A.,† New York, N. Y.

Last Saturday in New York, I participated in a panel session before the district branch of the American Psychiatric Association discussing the implications of the mental health program of the American Medical Association. Dr. Gerald D. Dorman, a member of the AMA Board of Trustees, described the interest of organized medicine in the AMA Mental Health Program. Dr. Duncan Whitehead, a leader in the American Psychiatric Association, commented on the program from the viewpoint of the psychiatric society. My analysis was from the viewpoint of citizen groups. It is encouraging to note that those who planned today's meeting also recognized the interplay of medicine, psychiatry and voluntary organization and arranged for keynote speeches to be given by Dr. Beaton, Dr. Garber and myself.

We of the citizens' organization welcome this manifest demonstration of the importance of cooperative action for mental health and the sponsorship of this conference by the Tennessee Medical Society and the Tennessee Mental Health Association. This conference and its counterparts in other states constitute a follow-up of the AMA's First National Congress on Mental Illness and Health held a year ago in Chicago, and hold great potential in attaining the objectives of the AMA Mental Health Program and for the corresponding objectives of the National Association for Mental Health.

I am particularly pleased that your keynote speaker was Dr. Lindsay Beaton, whose leadership as a member and currently as chairman of the Council on Mental Health of the AMA has been outstanding. His testimony before the Congress in the hearings which followed the President's Message on Mental Health last February was most convincing. He contributed much, along with other members of the AMA Council on Mental Health, to the interpretation of the mental health program to the House of Delegates at Atlantic City. It is important to us in the citizens' organization that organized medicine continue to produce such leaders as Lindsay Beaton.

Dr. Beaton has emphasized the interest of all medicine in the mental health program of the AMA. I particularly want to emphasize the interest of the citizens' organization,—the National Association for Mental Health (NAMH) and its Tennessee Division, the Tennessee Mental Health Association. I particularly want to commend the outstanding work of the Tennessee Division under the leadership of Judge William O. Beach, and its exceptionally competent executive director, Clyde Wilson.

One of the most widely used phrases during the past year in the publications and meetings of the NAMH, its state Divisions and local Chapters has been, "Mental illness is America's most pressing and complex health problem." You will all recognize this as the opening sentence of the AMA statement of Principles on Mental Health—a statement developed in connection with the AMA Mental Health Program as enunciated by its Council on Mental Health. We are partciularly pleased that the medical profession has recognized mental illness as America's number one health problem. Last September, the Executive Committee of the NAMH recognized the importance of the AMA Mental Health Program, designed as it is to bring the entire membership of the organization—as citizens and as professional people—into the fight against mental illness. In its resolution commending the American Medical Association, our Executive Committee said, "The involvement of hundreds of thousands of physicians in community services and citizen activities concerned with the treatment and prevention of mental illness and the rehabilitation of the mentally ill will open

*Read at the First Tennessee Congress on Mental Illness and Health, November 13, 1963, Nashville, Tenn.

†Executive Director, National Association for Mental Health, New York, N. Y.

up a tremendous reservoir of expert knowledge and community leadership." They went on to say, "We anticipate a new and powerful forward surge in the nation's fight against mental illness as a result of the new mental health program of the American Medical Association." This forward surge is on. Truly a revolution is underway in the care of the mentally ill, and it is especially important that that revolution move forward rapidly. Not enough people realize that medical science can now do more for the victims of serious mental illness than for the victims of cancer or heart disease. The fact that 75 to 85% of patients admitted to mental hospitals can now be discharged within a few months, demonstrates the efficacy of modern intensive treatment. Revolutions, though sometimes generated by desperation, are most effective when there is real hope for improvement. In this revolution hope can be raised high—hope which is now more soundly based on scientific knowledge than the hope which sparked previous revolutions. In this revolution, as in all previous revolutions in medical care, the lay citizen and the medical profession must work closely together.

Previous revolutions were sparked by Phillippe Pinel in France in 1792 when he struck the chains from the mentally ill; by Dorothea Dix one hundred years ago when she demanded that states create "asylums" for the mentally ill, and by Clifford Beers fifty years ago when he created a national citizens organization to provide leadership in the fight against mental illness.

The new revolution had its inception in the last ten years when new methods of intensive treatment pioneered here and abroad, including the advent of psychiatric drugs, opened up new hope for early, effective and short-term treatment in the community rather than in distant, isolated hospitals or "asylums." The new methods made possible drastic changes in the clinical and administrative aspects of the treatment of the mentally ill.

New treatment methods reduced the length of time new patients stayed in hospitals. Control of symptoms by drugs enabled many long-term patients to be returned to their homes. New admissions increased, but the daily census in mental hospitals which had been constantly growing suddenly stabilized in about 1955 and has shown a gradual decline each succeeding year. I am told Tennessee shows the same increase but noes not show the decline in daily census.

Treatment, slowly replacing custodial care, started moving the care of the mentally ill back into the mainstream of medicine. Increasingly inpatient psychiatric care began to be provided in general hospitals, although not more than 20% of the general hospitals as yet provide psychiatric services. Nevertheless, in 1961 more patients were admitted to general hospitals for treatment of mental conditions than were admitted to mental hospitals.

Experiments with day hospitals, night hospitals, facilities for emergency treatment and services for aftercare and rehabilitation in the community gave further impetus to the changing concept of care. In a few places community mental health centers began to take shape—centers offering the entire range of services for the mentally ill: diagnosis, prevention, treatment, rehabilitation, inpatient care, outpatient care, day treatment, night treatment, emergency care, as well as research and training.

Recognizing the early signs of the revolution, leaders in the American Medical Association and the American Psychiatric Association called for a new and comprehensive nationwide study of mental illness. This led in 1955 to the creation of the Joint Commission on Mental Illness and Health which, with Federal support and the cooperation of 36 national organizations, undertook a massive examination of the entire problem. The Commission's final report, *Action for Mental Health,* released in 1961, offered a blueprint for a new national program for better care of the mentally ill, with emphasis largely on the development of community-based facilities and services, care of the patient on much the same basis as care of the physically ill, increased expenditures by all levels of government, underwriting of some of the costs through insurance programs, stepped-up programs of research and training, and improved

counseling services by pastors, social workers, teachers and others in the community to whom people turn for advice.

The Joint Commission Report has not been allowed to gather dust. In 1961 the governors held a special conference on mental health. The program of the American Medical Association, adopted in 1962, is a direct outgrowth of the Joint Commission Report. The National Association for Mental Health, accepting responsibility to direct continuing attention to the Joint Commission recommendations, has convened National, Regional and Statewide Leadership Conferences involving representatives of hundreds of related health, welfare, civic, fraternal and religious organizations.

After study of the Joint Commission Report by a Cabinet Committee, the President presented an historic message to Congress in February 1963, outlining a new national mental health program. He called for an end to the tradition of neglect of the mentally ill and of their abandonment in custodial institutions. He called for a bold new approach based on new knowledge and psychiatric methods, an approach which would concentrate on the development of a wide range of community services for diagnosis, prevention, treatment and rehabilitation. He proposed that the states begin to build a chain of community mental health centers giving comprehensive services and plan to meet the communities' mental health needs long range. He also called for federally supported demonstration projects to improve care in state hospitals and for increased support of research and training programs. He states, "This tradition of neglect must be replaced by forceful and far-reaching programs carried out at all levels of government, by private individuals and by state and local agencies in every part of the Union." Legislation to effect the President's recommendations was promptly introduced in both houses of the Congress. The principal bill to assist in the construction and initial staffing of community mental health centers, after favorable testimony by lay and professional organizations, passed the Senate by a vote of 72 to 1. The bill was S 1576. Action by the House drastically cut the provisions for construction and eliminated funds for initial staffing. After lengthy negotiations, the Senate and House conferees agreed in general with the House version which was passed in October, and signed into law as Public Law 88-164 on October 30.

Meanwhile, under a Fiscal 1963 appropriation, the National Institute of Mental Health approved grants to virtually all of the states to enable them to undertake a two year program of planning for comprehensive community mental health services. This is the keystone in the structure of new facilities and services for the mentally ill, consistent with the new concept of care close to home, family, church and job.

It is significant that the guidelines for the Federal mental health planning grants stipulate that mental health associations and medical and other professional groups shall be involved in the planning process. This conference and its follow-up activity can make a significant contribution to the planning process underway under Dr. Baker's leadership in Tennessee. Both the Tennessee Medical Association and the Tennessee Mental Health Association should have specific representation on the Planning Advisory Council foreseen in Dr. Baker's plan.

The community mental health center, as envisioned in the national legislation and in the planning operation, should not be regarded as just a set of new buildings. It is primarily a concept, a concept which envisions continuity of care with services available in the community under various auspices and under various roofs which will provide the many different kinds of help which the patient will need in the course of his recovery. It is a direct outgrowth of the growing conviction that the mentally ill should be cared for on much the same basis as we care for the physically ill, and that the concept of the "Ward of the State" is outdated and must go. It means that the costs of care of the mentally ill should no longer be primarily a charge against the State tax dollar, but rather should be met through a combination of tax funds drawn from all levels of government, private fees and prepaid health insurance.

At this point I should like to quote from Dr. Dorman's talk given last Saturday at

the district branch meeting of the American Psychiatric Association in New York. He said, "If the community mental health centers are to fulfill their great potential, we need the active support of all physicians. New channels of communication must be found to reach the practicing physician and to show him, in realistic terms, just what his role is in the care of the emotionally disturbed." He went on to say, "There are significant differences treating emotional and physical disorders and these must be explained. While much has been written about the efficacy of the psychopharmaceuticals in the management of mental illness, we cannot leave the nonpsychiatrist with the idea that all he need do is prescribe a tranquilizer and the patient's emotional disturbance will take care of itself." And he added, "Above all, we must make it perfectly clear that community mental health programs are not an encroachment on the private sector of medicine. If they do anything, they will certainly enhance the role and responsibility of the psychiatrist in private practice, the psychiatric and general hospitals, and in fact of all physicians."

The activities of the National Association for Mental Health and its state Divisions and local Chapters can best be catalogued within three major functional areas: (1) education, (2) research, and (3) service.

Our educational activities are aimed at both the general public and specific groups both lay and professional. In the area of general public education we seek to eliminate the fear and misunderstanding which places a terrible stigma on the mentally ill and prevents early diagnosis, intensive treatment and effective rehabilitation. We want the public to know about the hope for the mentally ill, and we want them to seek early help, particularly from their own private physicians. We want the sick person's family, neighbors and friends, employers and associates to understand that the mentally ill can come back and that these associates have much to do with his rapid recovery and continued ability to handle his own stresses and strains.

Educational programs are also designed to reach specific groups such as the clergy, the police, business management, teachers and others who are in a position to provide what might be called "first aid" and appropriate early referral in the early stages of emotional difficulty. We feel further that our Associations, in collaboration with medical societies and medical schools, can do much to encourage formal and informal postgraduate training for the nonpsychiatric physician and for other professions in which the practitioners need to improve their knowledge and skills in the handling of emotional difficulties.

In our research program, although admittedly we have limited funds to allocate in comparison with the resources of government, we provide significant support for projects which could not otherwise get underway, help retain the interest of young scientists in mental health research, and perform a "watch dog" function in connection with the government's research program.

In the service area, the program of the NAMH is designed primarily to help people in trouble because of mental illness along lines which are appropriate for a voluntary health organization. This means we provide information to the mentally ill and to their families, volunteers to help maintain contact between the hospitalized patient and his community, trained volunteers to assist the professions as appropriate both in the hospital and in the community, help to assure suitable living conditions, jobs, social contacts, and all of the elements necessary to successful rehabilitation for patients who have been in mental hospitals, services to the parents of mentally ill children and appropriate community activity to assist such mentally ill children to attain their fullest potential.

We see a major role in calling attention to shortcomings in the galaxy of community services necessary for the prevention and treatment of mental illness and the rehabilitation of the mentally ill, and mobilization of community forces to see to it that such gaps are filled. Frequently, of course, this requires action by legislative bodies, whether at Federal, state or local level, and a major role of the mental health association is in the area of providing information

and organizing pressure necessary to obtain legislative objectives.

I think this emphasizes the importance of this meeting, its discussion groups, and its follow-up action. You have in Dr. Baker an outstanding Commissioner of Mental Health, but you nevertheless have in Tennessee, despite all of his efforts and those of his colleagues, a situation that demands improvement. According to the latest available figures, Tennessee ranks well below the national average in all of the accepted ways to measure state action on behalf of its mentally ill. Although it is admittedly a poor yardstick, the latest available figure on cost per patient day in mental hospitals in Tennessee is the figure for 1960 of $2.72 a day as against the national average of nearly $5.00 per day. This ranks Tennessee as 48th among the 50 states in its care for the patient in the state mental hospital. When you figure that this cost covers not only food, shelter and clothing but also all of the medical services available, and you compare it with the average cost per day in a general hospital, you have some measure of the difficulty in trying to provide adequate care for the mentally ill in Tennessee. There is obviously an urgent need for cooperative action by the medical profession, the citizens organization, and the state officials to improve the situation.

I would like to suggest five things that I think you and your associates in this cause might be telling your colleagues in the profession and the public at large. They are:

(1) Tell them that mental illness is America's most pressing and complex health problem and that that is true in your community, too.

(2) Tell them that mental illness is no longer hopeless.

(3) Tell them that the mentally ill can be treated in the community on much the same basis as the physically ill, especially if insurance provisions are extended to cover mental illness as well as physical illness.

(4) Tell them that the place to start toward the expansion of community facilities and services is in the general hospital and that every general hospital should be able to provide psychiatric services; as a matter of fact it should not be called a general hospital unless it does provide psychiatric services.

(5) Tell them that the American Medical Association, the American Psychiatric Association and the National Association for Mental Health are working together at the national level and with government in the fight against mental illness, and that this action cannot be effective unless there is corresponding cooperative action at the state and local levels.

We of the citizens organization pledge to you of the professions our continuing cooperation and understanding. We seek your cooperation and understanding so that together we can strive for the day when we can all say, "Mental illness is no longer America's most pressing and complex health problem."

Information And Education In Community Mental Health*

WILLIAM F. SHEELEY, M.D.,† Washington, D. C.

Before embarking on any informational and educational program, one should ask just why the program is necessary in the first place. One should ask what specific problems need solving so one may gear the informational and educational program to best solve the problems. When we are thinking of a program of information and education in community mental health, we scarcely need ask whether there are problems which need solving, nor need we concern ourselves with a search for evidence that the public urgently needs to be more fully informed about mental illness and health than it is now. The very fact that we are here today attests to this.

The urgency of the need for a program of public information and education arises in part from the pervasion by mental illness of all aspects of community life. Possibly every person within the sound of my voice either presently suffers from some degree of emotional or psychiatric disturbance, has once so suffered, will sometime in the future suffer, or has a relative or close friend who is suffering, has suffered, or will suffer. I make this assumption because emotional disturbance is everywhere. Estimates upon how many people have significant mental illness at any given moment vary from study to study, but most authorities put the figure somewhere in the magnitude of one in six or one in eight citizens. As time goes on, some of these people pretty much recover, but still others become disturbed, and so the procession continues. Obviously, the vast majority of these one in eight who are emotionally disturbed are neither in psychiatric hospitals nor under formal psychiatric out-patient care. Furthermore, most of them have transient disorders, relatively mild neurotic conditions and the like, which do not demand treatment. Yet even such mild disorders sap people's relations with their friends, neighbors and relatives, and sap people's efficiency on the job. Such disorders impair people's social and economic functions. For example, the four most vexing personnel problems of business and industry are the four A's:—Accidents, Absenteeism, Anxiety, and Alcoholism—are usually caused, or at least made worse by psychiatric disorder.

Since emotionally disturbed people are ubiquitous, all of us encounter them almost daily, at home, on the street, at work or wherever else we may go. When we do encounter them we must deal with them. When we must deal with them we want to deal with them properly. To do so, we need some understanding of the nature of all emotional disorder. We need to know how to recognize it, how to weigh its effect on a given suffering person and, of course, how to be the most humane and helpful. Though we all need this knowledge, all of us do not have it. On the contrary, many of us unfortunately have more misinformation than correct information. For example, we often label some behavior as "immoral" though it is really behavior arising from mental illness, and we often believe an illness is physical when it really is psychiatric.

Such public misconceptions are especially deplorable because they are often unnecessary. Psychiatry adds daily to its already substantial store of knowledge which the general public should have. Unless we do something to funnel present and future knowledge from psychiatry to the public, however, the gap between what people could and should know, and what they in fact do know, will continue ever to widen.

This gap between what could be known

*Read at the First Tennessee Congress on Mental Illness and Health, November 13, 1963, Nashville, Tenn.

†Chief, General Practitioner Education Project, American Psychiatric Association, Washington, D. C.

and what actually is known has very human importance. Because of this gap thousands of Tennessee citizens are suffering needlessly. These thousands include not only the people who themselves are sick, but also the sick people's children, spouses, parents, and others who also suffer when someone becomes sick. Because of this gap, sick people and their relatives are not aware of the relief which modern psychiatric treatment might provide. They are not receiving the benefits, for example, of new psychiatric drugs and of such special psychiatric therapy as electroconvulsive therapy.

Because of this gap, people continue to stigmatize mental illness and mentally ill people. This undeserved stigma adds shame to the burden of psychic pain. This shame prevents sick people and their relatives from seeking help, because the admission of mental illness opens them to snubs, innuendos, scorn, and castigation by friends and neighbors.

Because of this gap, many disturbed parents often remain unnecessarily disturbed and have attitudes which threaten the mental health of their children. Today's child who is confused and tormented by his mother's psychiatric upset, becomes tomorrow's psychiatrically upset mother who unintentionally confuses and torments tomorrow's child. And so we watch mental illness' ponderous, funereal march over successive generations of impressionable children. Modern treatment can help in stopping this terrible march; specific therapy given today's mother, and some counseling to help her to relate better to her children, could break this tragic chain, if the troubled mother but knew such help and guidance exist.

Because of this gap, too many patients remain too long in state mental hospitals and similar institutions. At this very moment, as we talk here, patients are ready psychiatrically for discharge. But they cannot be discharged. We know they are not kept there by the staff which is continuously looking for opportunities to discharge them. No, they are kept there by public stigma, by public unwillingness to provide adequately for them in the home communities. Furthermore, many patients who are still too sick for discharge, could get better if public support permitted the state hospital's treatment program to be expanded and improved. Incidentally, do not let anyone tell you that mentally ill people are happy. They are miserable.

Perhaps the discussion up to now has seemed a little maudlin. Perhaps it has emphasized the aspects of human suffering to the point of sentimentality. Let us put away our crying towels for a while, then, and take a realistic look at public informational and educational programs. Cold-blooded reasons for these programs are easy to find. After all, mental illness costs us money. Unnecessary mental illness costs us money unnecessarily. For instance, like most cheap things, the cheap and therefore inefficient care which inadequate budgets force state hospitals to provide is remarkably more expensive than is efficient care. The greatest hoax since P. T. Barnum's petrified man is the formula whereby we figure state hospital costs by determining how much it costs to keep one patient in the hospital for one day. This formula is that Delilah of the budgets, per-diem cost. A hospital with a per diem cost of $5.00, which keeps its patients for many years, is not six times cheaper than is a hospital with a per diem cost of $30.00 which keeps its patients for only weeks or months. In the hospital with low per diem figures, the cost of a thousand patients per day may be low, but the cost of a thousand patients per lifetime is staggering. This view of the expensiveness of cheapness does not, of course, take into account the economic loss when the community supports a patient in an institution rather than the patient's supporting himself in the community. Nor does this view take into account the hard-to-estimate economic burden imposed by the one in six people in business and industry with sufficient emotional disturbance to interfere significantly with their efficiency on the job.

If we have, then, seen a few reasons why a program of information and education in mental health is needed, what things should that program contain? What should it seek

to impart to the general public? What, if you like, should its messages be?

The mainstay of any program of public information and education in community health, of course, is basic facts concerning the causes and nature of mental illness. True, we do not have all these facts. Much knowledge about mental illness must yet be discovered by the psychiatrist and by the researcher in mental illness, but we know a great deal more than the general public knows. These known facts are the only good way of correcting the superstitious and fallacious folk lore which has come down to us from the Middle Ages and before. These facts must eliminate the absurd public awe and fear of the mentally ill person.

Other important public information concerns the facilities in the community which deal with mental illness and health. Unless citizens are informed about what can reasonably be expected from available facilities, one can scarcely expect public support for the creation of a new facility or for the expansion of an existing one. These facilities, by the way, to cite a partial list, include practicing psychiatrists, psychiatric units in general hospitals, community social welfare agencies, informed clergymen, visiting mental health nurses, practicing physicians who are not psychiatrists but who have psychiatric knowledge and skills, psychiatric outpatient clinics, visiting nurses, vocational rehabilitation agencies for psychiatric patients, nursing homes, half-way houses, and psychiatric advisors to courts and law enforcement agencies.

The content of the public program of information and education should be divided into specific categories which are especially appropriate for certain groups of citizens. Some general information, of course, should be given to all citizens; some other details of information, however, will have great interest and usefulness for one or a few citizens' groups, but little applicability for other citizens. The program, therefore, should give each specific community group the specific information it needs to recognize and to solve the mental health problems for which it is particularly responsible. The informational and educational program should give such guidance as, (1) how to establish and maintain effective cooperation among members within a group and among that group and other community groups with common problems and goals; (2) how to organize community forces to bear on problems; (3) how to identify problems which need action by governmental bodies as the city council, the county commissioners, or the state legislators, and how to bring those problems most clearly and helpfully to governmental attention; and (4) how to help such administrative and service units, as the state mental health division and welfare agencies, to solve their problems and do the best job. The informational and educational program should show all citizens of the community—but especially prominent citizens with influence on civic affairs—what the problems are, what citizens' responsibilities are in the effort to solve those problems and how to go about seeking solutions.

The public information program should, of course, also be addressed to mentally ill citizens and their relatives. It should show them how best to use such facilities as are available in the community. Whoever conducts this part of the program should know not only where the facilities are, but also the kinds of problem with which each facility deals best. Such guidance helps people avoid, on the one hand, failure to take advantage of help that is potentially available, and on the other hand, disappointment because unrealistic expectations cannot be realized.

Having examined some of the why's and what's of a public informational and educational program in mental health, let us now ask who is responsible for the creation and operation of the program?

Since mental illness and health is primarily a medical problem, medical organizations and individual physicians—both psychiatrists and others—must assume a major responsibility for information and education in community mental health. Such medical organizations as state and county medical associations, the psychiatric societies, units of the American Academy of General Practice, elements of such specialty organizations as the American College of Physicians and the American College of Surgeons—all these have public obligations

of which information and education are important ones. Medical schools also have educational responsibilities which extend far beyond academic walls and long after the undergraduate and graduate levels of training. They have a special responsibility for the life-long education of physicians. But they also have a broader responsibility to the community as a whole—this is an academic responsibility which has been passed down to them without interruption from Chaldean, Egyptian, Greek, and medieval colleges. As institutions of learning, medical schools must assemble facts, protect them, and disseminate them. But no more than the medical school can individual physicians, including psychiatrists, escape the admonition of Hippocrates and of all the great physicians who both preceded him and succeeded him to remember that from the beginning the word "doctor" has meant "teacher."

Mental health associations at all levels—national, state, and local—have their own important responsibilities. That they recognize these responsibilities is proven by their emphasis on the creation and operation of special informational services to guide disturbed people to places where they can get help. Furthermore, they conduct public programs of education which range from news releases to mass communications media to special courses for such groups as clergymen and industrialists. For example, a mental health association co-sponsored the conference which has brought us here today.

Civic organizations should use not only their positions of influence in the community, but also their organizational resources to foster programs of mental health information and education. A few of these civic organizations are the Kiwanis, the Rotary, and the Optimist Clubs, veterans organizations, the Knights of Columbus and the Masons, the Chamber of Commerce (particularly that remarkably enthusiastic group the Junior Chamber) and the League of Women Voters, the National Association of Manufacturers and labor unions, the Junior League, and the Bar Association. This list, of course, continues throughout the fabric of the community wherever citizens who want to improve their community have united to pool their efforts.

Governmental units, simply by virtue of their assigned functions, have responsibility for public information and education in mental health. At the state level we look especially to the governor and to his important aide, the state mental health program director. The governor and the director, however, can accomplish relatively little without the vigorous support of the state legislature. State mental hospitals and other state-operated psychiatric facilities have great responsibility. Important as governor, state director, legislature and state hospitals may be, though, an even greater responsibility rests with local government, for it is in the county, in the city, and in the town that the mentally ill person needs the attention of his neighbors as symbolized by county and city officials. The whole movement to care for mental illness in the community will, in the final analysis succeed or fail, depending upon what the local people do. Local governments will need to find the necessary funds, to provide necessary permission, and to influence makers of public policy, if the public information and education program is to succeed.

Having discussed the *why*, the *what*, and the *who* of an information and education program in community mental health, we may now logically ask: How?

We have already noted that a mental health message should fit the specific citizens' group to whom it is addressed; we might now add that the message should also be presented in the way most comprehensible to that particular group. The method of presentation should not only recognize the fact that different groups have different languages, it should also recognize the fact that different groups have different interests and different value systems. Thus, a given public information message, which might fascinate and stir one group of citizens would only bore and confuse another. A public information and education program must, therefore, in reality comprise several programs which may all convey the same basic messages, but which use different approaches and language to make the messages the most interesting and comprehensible to each group in the community.

This is not to say that mass communica-

tions media have no value in an education program. Indeed, newspapers, organization newsletters, the radio and television, speeches to parent-teacher associations, and so on, are a mainstay of any program.

There should also be developed, however, special devices for informing and educating special groups. A case in point is the postgraduate course in psychiatry for the practicing physician. Such a course brings to the physician the latest discoveries and innovations in psychiatry—with particular reference to the ways in which those discoveries and advances can be adapted the most usefully to everyday medical practice. Similarly, one can offer to other groups such as clergymen, nurses, lawyers, judicial officials, parents, school teachers, law enforcement officials, personnel officers, union stewards, businessmen, and the many other people who deal constantly with the citizen and his foibles, one can offer to each of these courses which both expand their abilities to recognize and deal with commonly encountered personality problems, and enhance their value to the community mental health effort. We have said that one should carefully tailor these courses to the specific needs of the specific group to which they are specifically addressed. When one is planning a course, therefore, he should invite representatives from the group addressed to participate in that planning. These representatives can help to interest their fellows in taking the course, but more importantly, they can explain to those who are offering a course the kinds of common problems which members of their group encounter daily, and therefore the kinds of information and education which would both fill their needs and arouse their interest. Such exchange of ideas between course faculty and course participants makes less likely the unfortunate gaps which so often develop between those with information to impart and those who need to receive it.

Workshops such as the conference here today, of course, are invaluable not only to impart information of a general nature, but more importantly, to bring together representatives from many elements in the community to compare notes, to identify common problems, to learn one another's capabilities, and to hammer out methods of collaborative effort to solve common problems.

One community organization should be selected to undertake ongoing broad responsibility for the community mental health education program. This organization will need regular, paid staff to develop and implement plans and policies conceived and approved by civic groups.

Citizens' groups should create advisory committees to assist state legislators, county commissioners, city councilmen, and other officials as they make their determinations. This keeping governmental officials currently informed is an important function of committees representing civic groups and other advisory bodies—and it is an important function of the over-all public community mental health information and education effort.

Reference should be made once again to the information service, operated full-time by a civic organization such as the mental health association, which gives needed personal information and guidance to individual citizens in trouble.

These, then, have been a few comments about the why, what, who, and how of an information and education program in community mental health. Each of you, I am sure, can add many excellent things to those which we have mentioned here. Each person has his own particular contribution to make to the community information and education program. The question facing each of us, then, is not whether he has something useful to contribute to the program, but rather, just what is it that he has to contribute, and how can he contribute it the most effectively.

Mental Disease: Medicine's Dilemma and Manifest Destiny*

LINDSAY BEATON, M.D.,† Tucson, Ariz.

Mr. Chairman, Ladies and Gentlemen: From the very beginning of my planning for this visit to Tennessee it was my thought that no man had ever embarked on a more unnecessary errand. When Dr. Luton first asked that I speak to this Congress about the American Medical Association's program in mental health, I felt that I should be carrying coals to Newcastle. After reading the documents forwarded to me by Dr. Luton and studying your plans and progress, I was even further struck by my impertinence in presuming to preach to you about the problems of emotional illness. I fell back on a different figure of speech and thought that I would say that I was toting tranquillizers to Tennessee. In either case the commission was equally redundant. Especially to the home of Jack Daniel, certainly the most pleasant ataractic of the New World.

After the AMA. had my speech written for me, Dr. Luton phoned and asked if I would forego my assigned topic of "Mental Illness and the Physician" and replace Governor Clement as your after dinner speaker. It hardly seemed fair to me to ask a psychiatrist to substitute for such a well known speaker, but there seemed to be little choice. The alternative would have been the renunciation of my generous honorarium, but no one of my Scottish lineage could contemplate this. So I *am* "traumatized," and further because of a relighted memory of my early life about which Dr. Luton already knew. As a boy on the North Shore of Chicago, I used to play of a weekend on the green meadows of a local private asylum. We boys always kept a careful watch for the other disturbed persons who had a right to the grounds. One Sunday, and I shall never forget it, a patient escaped his keeper and began to pursue me. I fled as only a youngster can flee, heart pounding, lungs bursting. But he was long-legged and he caught me. I felt a gentle tap on my shoulder, and then he said, "You're it." Well, I guess I'm *it* tonight. Dr. Luton caught me, in a very weak moment.

Now I find that I am under two additional handicaps. This afternoon you heard three magnificent papers. Obviously there is no way to go but down, and I accept the role of starting you from the oratorical bottom, a service for which tomorrow's speakers at least should be grateful. Secondly, I imagine that I am suspect just as an Arizonian. Let me assure you that, whatever one of my desert compadres may have said for political purposes, I have not ridden here out of the sunset as a vaquero with the purchase money in my pocket for your ranch, the Tennessee Valley Authority.

I am by choice a before-dinner speaker, not an after-dinner speaker. Talking before one's audience eats reduces one's verbosity. Otherwise one is likely to be accused of saying grace, a long grace. To this I am sensitive also. My grandfather had two sons, David and Bruce, whom he regularly dined on the Sabbath. The old man pined for grandchildren, and one Sunday, prior to blessing the food, he said to his sons and their wives, "You twa' hae been wed 3 and 4 years respectively and neither o' ye hae gi'n me a bairn. Much as it goes again my Scottish blood I say to you now that the first that gi'es me a grandson or a grand-daughter will get a thousand pounds. Now bow your heads." When he looked up after the benediction there was no one at the table. This has taught me never to take my eye off the house. There are equally obvious hazards in the conditioning of after-dinner speakers. I recently entertained Ed Annis, President of the AMA—roast beef, tossed salad, cold dessert.

---

*Address at the dinner of the First Tennessee Congress on Mental Illness and Health, November 13-14, 1963, Nashville, Tenn.

†Vice Chairman, Council on Mental Health, American Medical Association.

Suddenly he stood up, a glazed look in his eye, wiped his mouth, took a firm grip on the edge of the table. I said, "Ed, what is wrong with you." He blinked and replied, "Heavens, I was about to make a speech."

Let me at least say one thing that I was going to say in my original paper. As a member of the Council on Mental Health of the AMA, I have had the opportunity of inspecting the mental health platforms of every state from Maine to California. Tennessee is our bellwether. Scout's honor. No other Commonwealth has a program so well-organized, so forward-looking, so comprehensive, so promising. At AMA we point to you proudly as a bright and shining example. It is a true privilege to acknowledge that your leaders in this effort have earned national as well as local recognition. I am speaking of, among others, your Governor; your Commissioner of Mental Health, Dr. Joseph Baker, and his dedicated staff; the psychiatrists and the associated professionals in your three magnificent medical schools; of the men of the Tennessee Medical Association, so ably led by my old friend, Bland Cannon; of its Committee on Mental Health and its Chairman, Dr. Frank Luton; of the members of your State Steering Committee; of the Tennessee Mental Health Association and its President, Judge William Beach. These devoted people are admired throughout the Union, not just in their own bailiwicks.

All disclaimers notwithstanding, I am here to speak, and speak I shall. Mark Twain once said that to do good is noble; to teach others to do good is nobler—and no trouble. Personally I believe that the time for evangelism and exhortation concerning mental health is past. We have reached the point of actual fulfillment. Speaking for the AMA Council on Mental Health, we are all a little sick of our paeans of self-congratulation. The plans have been laid; let us go to work. One of the reasons Tennessee both leads and shames her sister states is that *you* have gotten down to the brass tacks of implementation.

I would like to mention, with merciful brevity, a few of the considerations that American medicine thinks are both pressing and practical. I doubt that these notions are going to be particularly new to you. I may be pounding on a nail that has already been hammered home, I *am* here as an AMA spokesman, and there may be those of you who suspect cynically that nothing original has come out of that organization since the turn of the century. I happen to think otherwise, especially in the field of mental health, which is really why I am present. Besides, I am comforted by remembering Goethe's aphorism to the effect that when ideas fail, words come in very handy.

I want to expound on both opportunities and difficulties, on the dilemmas we face and the destiny that is so undeniably clear for those of us in the field of mental health and disease. Behind both aspects of this social prospectus lies a single blindness:—we, including physicians, or perhaps most especially physicians, cannot believe what we see. Ladies and gentlemen, this venture we have so bravely undertaken *is* much bigger than any of us know. In fact, herein lies one of the threats to our schemes. We stress mental health, about which none of us knows very much; we are underplaying mental illness, about which we are beginning at least to know a little. Let us not oversell what we can in all honesty offer.

The first opportunity I want to underline is more than an opportunity; it is a necessity. It is the requirement that the mental health program remain always an alliance. The care of the sick has traditionally been the physician's business. This has been as true of the emotionally ill as of the physically ill. The world has changed. No physician today would think of trying to provide care for his patients without the help of allied medical specialists,—the technicians of the laboratory, nurses, experts in the management of certain complicated instruments, or, more remotely but equally significantly, without the help of the physiologist, the chemist, the ecologist, and the nonmedically trained persons who support his endeavors and keep before his eyes the covenant he has signed with society. The psychiatrist cannot do his job without the clinical psychologist, the psychiatric nurse, the psychiatric social worker, the aide and the attendant, the sociologist and the cul-

tural anthropologist, without the nonscientifically educated volunteers who represent the people, who remind him that he is always only their servant, without the local, nonmedical organizations that must raise the money, must influence the legislature, must do what the physician cannot do—restructure the community atmosphere into one that is mentally healthful. Mental illness is a disease, a failure of the function of the organism, endangering its survival in its environment. At the same time it is a learning deficit, a social or cultural maladjustment, a task for rehabilitation, a need for re-acceptance into the patient's society. Sometimes the physician must be head of this alliance, sometimes the psychiatrist. At other times guidance must be put in the hands of the psychologist, the teacher, the social worker, the nurse, the rehabilitation counsellor, the family service agency, or the neighborhood or church group. There is no place for pride of position in the pecking-order. Georges Clemenceau said during World War I that war was too important a matter to be left to generals. Mental illness is too important a concern to be left to psychiatrists, or even to physicians.

The second challenge is a more purely medical one—the enlistment of every physician, and especially the general practitioner in the care of the mentally ill. Psychiatrists, psychologists, psychiatric social workers cannot begin to meet the need and they probably should not be expected to. No one should be better prepared to care for the average run of emotional disorders, the vast majority of the mentally sick, than the sensitive, alert, broadly trained family physician. He is or should be the expert in the ecology of the family. He can sense emotional illness sooner and handle it more expeditiously than the professional mental health person in most cases. We in the AMA and in the American Psychiatric Association and the American Academy of General Practice believe that the family physician, the "primary physician," as Hardin Branch so felicitously terms him, should be the first resource in case of mental illness. No one, except perhaps the minister (with whom the doctor should work closely in this area) has the background of trust, the immediate access to confidences that the family physician has by virtue of the fact that he has been a privileged and necessary attendant in other previous crises. He knows the nuances, the hints of trouble and, too, the tricks of the trade.

Every family physician must become engaged in caring for the mentally ill, a task that the AMA has officially proclaimed as the nation's most pressing health problem. Not only must the general practitioner be recruited for this campaign; he must also be educated in modern psychiatric theory and technics. This job has been undertaken by a special division of the American Psychiatric Association, under the leadership of Dr. William Sheeley, working together with designated committees of the American Academy of General Practice. Our third concern, then, yours and mine, is that the family physician become as well-oriented in psychiatry as he is in the other specialty disciplines. This does not mean that he should undertake psychotherapy in depth. But it also does not mean that he becomes a mere dispenser of Miltown. With further training he is the best person to understand the difficulties of emotionally ill patients and to lead them to their own understanding, to work within the framework of the community in which he lives, to cooperate with necessary nonmedical resources and nonmedical mental health professionals, to use the subtlies of the patient-physician relationship in the practical solution of the puzzles of mental illness. After all, the oldest piece of psychiatric advice I know of was very simple. It is ascribed to Aesculapius, and you will find it chiseled in stone on the walls of the old temple at Epidaurus. It was a prescription for one Apellas, and it reads, "Wash yourself well, stop over-eating, keep your temper, and tip the attendant generously." May I add that psychiatrists have always taken the last part of that admonition very much to heart.

The training of family physicians in psychiatry can obviously be accomplished through many means, and you will hear some of the problems of this education discussed during this Congress. I shall not

repeat what you will hear described so thoroughly. Let me point out however an unexpected and beneficial side-effect that comes from the liaison between people from the state mental hospital and family physicians, between local psychiatrists and the general practitioners they are enlisted to teach. These programs are very good for psychiatrists. They are thereby drawn back into the mainstream of medicine and community life from the little eddies at the edge of the current where they too often find themselves whirling in isolation. They become immersed again in the life of the community general hospital. They begin to appreciate the social and economic realities that do not always permeate to the ivory tower. They may even start to make house calls, which prolongs their life expectancy and usefulness by getting them out of the cigar smoke and into the fresh air.

The fourth and last point I want to emphasize is the continuing necessity for *local* control of any mental health program, as emphasized by Dr. Robert Garber. It was heartening that this need was the core of the President's message on mental health and mental retardation. In the President's own words, the aim is to return the care of the mentally ill to their own communities, to enable family physicians to treat their own patients in their own hospitals. It was for this reason that the AMA enthusiastically endorsed in substance the bills in the Congress designed to implement Mr. Kennedy's proposals. They were very different in medical direction from other recent federal health legislative proposals. In fact it is difficult to see how one can disapprove both mental health legislation, so conceived, and the Social Security "medicare" notion at the same time without being schizophrenic. Their intents seem diametrically opposed. It is, however, no secret to most of you that, after members of the Council on Mental Health appeared before committees of Congress in support of the bills, the House of Delegates of the AMA voted disapproval of the staffing provisions of the bills, in the fear that this was the cold nose of the federal camel poking under the edge of the state tent. This point of view undoubtedly influenced the final form of the legislation which eliminated funds for initial staffing. The psychiatrists of this country still believe that provisions for staffing were and are necessary. I trust that the fact that I can stand here before you as an AMA representative and still express openly this dissident point of view will prove to you that the AMA is not the grim, party-line monolith it is so widely represented to be. I can say what I and my confreres honestly believe. No effort is made to gag me. I shall not lose my position in the AMA because of heresy.

Whatever the disagreement on details, the fact remains that the AMA has sponsored a mental health program following the lead of the Joint Commission on Mental Illness and Health under the Presidency of a great man who will address you tomorrow, Dr. Kenneth Appel. If this is gratifying, it is positively epochal that the federal government would adopt a similar stance. In testimony before committees of both the Senate and the House, the AMA stressed the necessity of local control, suggested that the proper agency to administer a state mental health program is a *state* health agency, that the advisory board to the administering agency must include adequate representation from the medical profession and from the informed nonmedical public, and that *community* hospitals, whose boards of directors are representatives of the public, should be the first priority locations for the inclusive mental health centers envisaged in the acts. Behind a general program of mental health, locally run, everyone is united—the AMA, its constituent state and county societies, the American Psychiatric Association, The National Association for Mental Health, the American Academy of General Practice, and now even the Federal Government and the Department of Health, Education, and Welfare. There are very few voices of opposition. One is that of the Governor of a state not too far from the progressive paradise of Tennessee. Their contrariety serves only to distinguish such gentlemen as this. It does not make them distinguished.

Nonetheless, there are a few pitfalls

From the Executive Director

TMD MEDICAL DIGEST

News of Interest to Doctors in Tennessee

TMA Council Adopts Statement on Unethical Practice —Re Resolution No. 7 —Medical Laboratories

● The House of Delegates of the Tennessee Medical Association adopted Resolution No. 7 having to do with the regulation of medical laboratories. Action was taken by the House in its annual session in Memphis on April 14th.

The Resolution establishes TMA policy on the ethical relationship of physicians with medical laboratories not supervised by a licensed physician. The policy adopted states that the operation of a medical laboratory as defined represents the practice of medicine and that such medical laboratories should be actively supervised and directed by a licensed physician. It was further resolved that the patronization of laboratories which do not meet this requirement shall constitute the unethical practices of medicine.

As a result of this action, the TMA Council set forth the following statement:

"By the decree of the House of Delegates of the TMA, at its last regular session, has declared it is unethical for practicing physicians in the State of Tennessee to patronize commercial laboratories (those not under the control and supervision of a licensed doctor of medicine). Enforcement of this action will come in due time."

June Issue of TMA Journal to Contain Reports and Actions of House of Delegates

● A complete report of the transactions of the House of Delegates on the various resolutions, reports and amendments, acted upon by the House, will appear in the June issue of the Journal. Newly elected officers, abstracts of the reports of Board of Trustees, the Council, and other pertinent business approved by the Association's House of Delegates will be included in the June issue of the Journal.

1965 Annual Meeting to be Held in Chattanooga

● The 1965 Annual Meeting, to be conducted April 11-14, is scheduled for Chattanooga. Headquarters will be in the Read House Hotel. Meetings will also be held in the Patten Hotel as well as other locations which will be announced prior to the meeting.

AMA Annual Convention in San Francisco— June 21-25

● The 113th Annual Convention of the American Medical Association will be held in San Francisco, June 21-25. The meeting of the House of Delegates, business and policy-making body of AMA, will be conducted in the Fairmont Hotel. The scientific sessions, scientific and technical exhibits will be displayed in the Civic Center. (See Journal AMA, May 11th issue for complete program and forms for advance registration.)

TMA Committee on Medicine & Religion Dinner Meeting With Clergy

● TMA's Committee on Medicine and Religion hosted representatives of eleven religious denominations at a dinner meeting on Monday Evening, April 27th at Baptist Hospital in Nashville. The TMA Committee is a part of an expanding concept of health care. Man is affected in physical, spiritual, mental and social factors and the faith of the individual patient is a vital factor in total health. The

confidence that the average family places in its clergyman and physician requires that the two consult with each other whenever feasible. The joint effort of representatives of medicine and the religious denominations is to disseminate information on the program and to further cement the relationship between the physician and clergy. A movie entitled "The One Who Heals" was shown at the meeting.

Doctor-Owned Pharmacies

● Doctor-owned pharmacies may become a hot issue at the June AMA meeting of the House of Delegates, as well as in Washington. Some MDs would like the AMA to set stringent rules on such ownership to forestall possible Congressional action. Odds are it won't happen though. "If an MD can't be trusted to own a pharmacy," says AMA General Counsel, Robert B. Throckmorton, "where do you stop? Do you keep him from owning a hospital for fear he might overtreat?" (From Medical Economics, April 6, 1964)

Adoption Regulations

● Physicians asked to assist in adoption proceedings should be aware of the State Law which says that no person or agency except the Tennessee Welfare Department or an authorized agency may engage in placing children for adoption or be a party to an arrangement between prospective adoptive parents and natural parents for the placement of children for adoption.

Liaison Between Medicine & Religion

● A major step towards closed medicine-pharmacy liaison was taken in March with the National Congress on Medicine and Pharmacy in Chicago, sponsored by AMA, American Pharmaceutical Association. TMA was represented at the Congress.

House Ways and Means Committee in Executive Session

● On April 9th, the House Ways and Means Committee went into Executive Session to consider Administration-backed H.R. 3920, the King-Anderson Bill. The Committee may also study the feasibility of broadening the Kerr-Mills Law and the practicability of increasing the Social Security cash benefits. Should the Committee recommend the increase in benefits, it would necessitate a corresponding increase in either the Social Security tax rate or in the present $4800 wage base (to $5200 or $5400)---The Committee may base its recommendations for increased benefits on H.R. 6688 which was introduced by Chairman Mills, in May, 1963 and which provides for an increase in the Social Security wage base to $5400. Some informed sources said that an increase in either the tax rate or wage base would spell death to any pending medicare bill. It is not likely that the Congress would, on the heels of this tax increase, adopt a new program which would further increase social security taxes.

Also in Executive Session is the House Interstate and Foreign Commerce Committee meeting to consider H.R. 10041, the Hospital and Medical Facilities Amendments (Hill-Burton Extension) and H.R. 10042, the Nurse Training Act. (As of Journal publication date, no announcement has been forthcoming from these committees.)

Another Medicare Proposal

● A new voluntary medical care program for aged citizens has been proposed in a bill (S. 2705) introduced by five co-sponsors in the Senate. The program would be financed with federal-state matching funds and through annual fees paid by participants, ranging from $10 to $120. It would be open to persons 65 years of age or older whose incomes are no more than $3,000.

Public Service

THE TENNESSEE TEN

Hadley Williams, Public Service Director

Knoxville Academy Hosts Public Service Dinner

● The Knoxville Academy of Medicine held its annual Public Service Dinner May 8 at the C'est Bon Club with an excellent turnout reported.

Main speaker for the affair was Senator Thurston Morton of Kentucky. Senator Morton was selected as the Republican Vice-Presidential candidate at the Republican "Mock" convention held recently at Vanderbilt University in Nashville.

Medical Assistants Hold Annual Meeting

● The Medical Assistants Society of Tennessee held its annual meeting May 1-3 at the Peabody Hotel in Memphis.

Mrs. Peggy Conant of Kingsport was installed as President and officers elected for the coming year were: Miss Kate Harrison of Winchester, President-Elect; Mrs. Lorene Bare of Elizabethton, Vice-President; Mrs. Joy Faulkner of Nashville, Secretary; and Mrs. Mildred DeMoss of Jackson, Treasurer.

A resolution expressing appreciation to the Tennessee Medical Association for its interest and support of the Medical Assistant's Education Program was adopted. Resolution No. 16, endorsing the program, was passed by TMA's House of Delegates during the April annual meeting.

Next year's MAST annual meeting will be held in Kingsport.

Newspapers Support Medicine's Fight

● Favorable editorials supporting the profession's fight to prevent Federal intervention into the practice of medicine appeared in several newspapers across the state during the past few weeks. Excerpts from a few of these editorials follow.

CLEVELAND DAILY BANNER— . . . A function of government is to help the unfortunate and the needy, but proposals that put millions of citizens in that class just because they have reached a certain age seem to be going beyond the bounds of reason. Already taxation absorbs the savings of young and old alike; is it necessary to dump a heavier load on them by way of increased social security taxes for government-controlled medical care for persons who don't need it? . . .

COLUMBIA HERALD— . . . In the health program he has submitted to Congress, President Johnson has wrapped up in one package anything left over from the New Deal, the Fair Deal and the New Frontier—and stamped his LBJ brand on it. . . .

LEXINGTON PROGRESS— . . . Medicare would inevitably lead to an increasing government domination of the Medical Arts. That is the road to retrogression. American medical standards have no superior. Let's keep them that way.

NEWPORT PLAIN TALK & TRIBUNE— . . . Medicare actually would tax all who are working, no matter how little they earn nor how many people they have to support, to pay hospital and nursing home bills for all who have retired, no matter whether they need such help or not. . . .

CHATTANOOGA HERALD— . . . Is it too much to ask that those who are backing this proposal for government-controlled

health care for the elderly at least stick with the facts? Is it unreasonable to begin to question whether statements by Medicare proponents should be accepted in light of their obvious inadequacy concerning the cost of the program to the Nation's workers?

BRISTOL VIRGINIA-TENNESSEAN— . . . The medical profession has an extensive going program under which medical assistance and service is provided for all who need it, regardless of the ability to pay. . . .

SAVANNAH COURIER— . . . One of the lamentable facts about the controversy over Medicare legislation is that its proponents apparently feel no obligation to stick to the facts. . . .

KINGSPORT TIMES— . . . There is a great deal of misunderstanding about this Medicare bill in spite of all the discussion . . . as it stands the bill will give just as much relief to the millionaire over 65 as it does for the man in poor financial circumstances. . . .

MEMPHIS COMMERCIAL-APPEAL— . . . The more time goes by the more use of the Kerr-Mills Act is undermining arguments that medical needs of the aged require the Social Security method. . . .

WOODBURY COURIER— . . . With existing public aid plans in the medical field, and with the continued growth of voluntary health insurance, if it operates in a free competitive economy, there is every reason to believe that the number of elderly persons needing public medical assistance can be cared for properly without leaving the younger generation with billion dollar tax bills for compulsory health insurance payments through social security.

Kerr-Mills Benefits Continue to Increase

● The steady growth of the Medical Assistance for the Aged (Kerr-Mills) program in Tennessee is reflected in figures recently released by the Department of Public Welfare.

More than a quarter of a million dollars is being spent monthly by the State to provide hospitalization, nursing home care and drugs to medically indigent citizens age 65 and over. At the present rate of expenditures, approximately 3 million dollars will be spent during the current year to provide medical services to recipients of the MAA program.

As a comparison of increased services being provided under the program, 27% more money is being dispersed for services per month than was used during the entire fiscal year of 1961-62. A total of $182,893.42 was expended from July 1961 until June 1962. During the month of April 1964, $249,314.82 was spent for services.

In just over 2½ years of the program's existence, some 27,000 applications for aid have been approved and there are currently 21,945 persons certified to receive aid immediately should the need arise.

For the fiscal year to date, $1,139,021.40 has been expended for hospitalization, $299,768.88 for drugs and $195,866.09 for nursing home care. With two months remaining in the year, a total of $1,634,656.37 has been spent thus far for services under the MAA program.

Thought for the Month

● "Americanism means the virtues of courage, honor, justice, truth, sincerity and hardihood—the virtues that made America. The things that will destroy America are prosperity-at-any-price, peace-at-any-price, safety-first instead of duty-first, the love of soft living and the get-rich-quick theory of life." . . . Theodore Roosevelt.

ahead. One we may dig ourselves. In our enthusiasm for a common cause our various disciplines may stretch for leadership. There is no place in this job for a contest for captaincy. This, to coin a sparkling phrase, is a team effort. Many cases of mental illness of necessity remain under the superintendence of the psychiatrist, the internist, the general physician. Others fall to the primary guidance of the clinical psychologist, the psychiatric social worker, the speech therapist, the expert in remedial reading. Still others find their source of strength and new growth through community facilities and programs headed by persons without fundamental medical or scientific identification, the role so cogently delineated earlier today by Mr. Philip Ryan.

There are other problems ahead for you —for all of us. The difficulty of continuing the momentum of a program so bravely and confidently begun. The difficulty of maintaining useful liaison between the various members of the mental health team. Even the semantic difficulty of our varying languages, as Dr. William Sheeley mentioned this afternoon. Neurosurgeons, psychiatrists, cultural anthropologists, psychologists, all talk their own incomprehensible cant. Before I knew sociologists and social workers so well, I used to *meet* people, now I "interact"; I used to *talk* with them, now I "share"; I used to get into *bull sessions,* now I attend "workshops" and congresses. Sometimes I think it would be helpful if we all tried speaking English.

At least we are friends; we are on the same side, despite occasional intramural differences. At the very least we feel about each other the way we Army men used to feel about the Navy in the South Pacific in World War II—they were allies, kind of like the Chinese. But we have acquired some enemies too. There is hostility within the ranks of medicine itself, from doctors whose orientation to disease remains wholly organic. Then there are some perfectly honest people who genuinely believe that the mental health movement is un-American, subversive, and actually a part of the Communist apparatus. We know that this is the most arrant nonsense, but we have to be prepared to prove it. We have not yet met these people head-on, and I think we should. Milton said it: "Let Truth and Falsehood grapple; who ever knew Truth put to the worse in a free and open encounter." We need not fear a confrontation in the public forums; we will find that our foes have more bark than bite, more bluster than brain. To inspirit you I give you Emerson's wry advice: "Do not quit your belief that a popgun is a popgun, though the ancient and honorable of the earth affirm it to be the crack of doom." The opponents of the mental health program *are* ancients. They are as old as ignorance. They belong back with the fearful witch-hunters of the 16th century, whom Johannes Weyer had to battle. They are still dispensing an antique 100 proof hogwash, which is now a poison to progress. And as your clinching argument against them I would call to your attention that a mental health program has been approved by the House of Delegates of the AMA and that the American Medical Association is not exactly a left-wing organization.

To what I have said about both the opportunities that beckon us and the difficulties that may beset us, I would like to add one homely and simple thing—let us continually keep an eye on what we are doing. Let us keep our direction on what Dr. Joseph Baker today called an "obvious course." Let us formulate the best plans we can but always be ready for innovation, for new knowledge. The embarrassments and catastrophes that come from not being alert we can avoid.

No one in this room can doubt that we are seeing tremendous advances in all aspects of our common endeavor. No one, I hope, will contest the conviction of the Council on Mental Health of the American Medical Association that we are witnessing so striking a change in the care of the mentally ill in America that it can rightly be called, as Mr. Philip Ryan termed it today, a revolution. It is our good fortune—yours and mine—to be in the attack brigades of that revolution.

Action For Mental Health — The Joint Commission Report*

KENNETH E. APPEL, M.D.,† Philadelphia, Pa.

Many things bring me here today: (1) because I believe in mental health; (2) because I believe in the relief of suffering; (3) because I believe the suffering of much mental and emotional illness is preventable, and (4) because I believe that much mental and emotional illness is curable.

There is a lag in, or lack of the use of much of the knowledge we possess about mental illness, and therefore there is much needless suffering. Since the health of individuals is one of the greatest resources of the Nation, many of our national resources are wasted.

This Conference is to gird our minds and muscles for the health, survival and happiness of our fellow men. I believe in Man, and probably the chief reason for my being here today is that I believe in Dr. Frank H. Luton, Dr. Joseph J. Baker and Dr. William F. Orr.

When 15 to 18 million citizens in the course of seventy years—the life expectancy of the average person today in the United States—will be out of work, out of production, and be supported by their fellows, because of mental or emotional illness, mental illness becomes a national issue. Can we afford, in the world of competition today, to carry even temporarily such expendables?

A powerful nation has never foreseen its downfall and doom—from Egypt and Assyria to Greece and Rome, to Napoleon and Hitler. Forces eat away at foundations like termites at the beams of buildings,—outside smooth and deceptive, inside corroded, eaten and crumbling. The health of the citizen is the strength of the people and the prevention of disease and recovery from it are of national concern.

Twenty-five billions of dollars is the health bill of the United States and mental illness provides a sizeable and significant share of this bill. Billions of dollars are the unemployment bill of this country. In industry one machine may do the work of ten men; in sickness no machine can take the place of one father, one mother, one child. In disease we get beyond machines, mechanisms and the usual mathematics. A man can be a unit in a factory, a union, or a city.

One cannot weigh suffering and put it into statistics, and the loss of a bread-earner, a parent on relief, the loss of a father in anxiety, the loss of a child, the longing and loneliness, the loss of a mother, the chaos, coldness and deprivation that haunts a home are not matters to be measured by calculations. They weigh down morale, lower leadership and destroy productivity.

The statistics of the plane crash of the elite leaders of Atlanta, the figures of the Thresher loss, or the sinking of the Andrea Dorea suddenly sadden the hearts of millions of countrymen.

But the catastrophies of nature, disasters of the machine age or diseases of man are a challenge to the ingenuity and resourcefulness of men, and bring prompt investigations and remedies, research and reassurance. But the slow, weary, wearing of mental illness arouses no prompt public response, since like the poor person, it is always with us, until complacency almost blinds us to its presence. The mentally ill cannot speak for themselves, and their spirits are so ground down that they despair not only of help, time and circumstance but that medicine and society have passed them by and thus they may even reject help. They become caricatures of humanity, so vividly represented by the dehydrated calcified frozen caricature of death as represented by the portrait of *Anxiety* which some of you may remember as the cover picture of *Time Magazine* in the

*Read at the First Tennessee Congress on Mental Illness and Health, November 13-14, 1963, Nashville, Tenn.

†President, Joint Commission on Mental Illness and Health, Philadelphia, Pa.

Spring of 1961. They are neglected, forgotten by a complacent society.

"Yet within little more than a single generation, the great complacency has been shattered. After two world wars, the ruins have appeared in modern society. Men have walked through their own cities and seen in one night damage which the Goths or the Vandals could hardly have inflicted in fifty years. Ahead of them lies the risk of other and worse destructions, of atomic destruction which may blast the fertility of the soil and twist the biological forms of human life. And, short of complete physical catastrophe, another horror has been conjured up in the shape of social orders so inhuman that they seem better fitted to termites than to men and women. The anti-Utopias, the 'Brave New Worlds,' the 'Nineteen Eighty-fours' project into the future a vision of society more dark than the deepest pessimism of the ancient world ever conjured up.

"The collapse of confidence has occurred in a few decades. To some it gives listlessness and despair, to some nostalgia and hankering for what is past, to others fear and the ugly anger that springs from fear. To all, it gives anxiety, a sense of searching, an awareness that even the most settled aspects of our world are precarious.

". . . The confidence in state action, the glorification of technology, the unlimited faith in science, the centralization of decision, and the subordination of law (and I would add human needs) to so-called mass interests—all these, which in an extreme form have gone to set an inhuman stamp upon Soviet society, have helped in the West to create communities in which the individual citizen feels overwhelmed, isolated, and helpless before the anonymities of public and private bureaucracy. We are right to fear these vast distortions of tendencies already at work in our own society. Both the Soviet and the Nazi systems must stand as dread reminders that in the twentieth century, the line of least resistance in politics tends toward the full apparatus of totalitarian rule. It is not wrong to fear such warnings. It is the beginning of wisdom."[1]

The confident and complacent society of this country has remained aloof from many problems, not least among them that of mental illness. Society remained aloof until the effective report on mental illness and resources by the American Psychiatric Association, the American Medical Association and their many collaborators. Thirty-six national organizations were represented on the Joint Commission, and 45 specialists devoted days and dollars in voluntary contributions to this great effort; there was a staff of 70, and 200 consultants had a part in it.

President Kennedy[2] said:

"Unless man can match his stride in weaponry and technology with equal strides in social and political development, our great strength, like that of the Dinosaur, will become incapable of proper control—and man, like the Dinosaur, will decline and disappear."

This was echoed in his message on mental illness and mental retardation to the Congress of the United States in February 1963.

"We must promote . . . to the best of our ability and by all possible and appropriate means . . . the mental and physical health of all our citizens. . . ."

The studies of the Joint Commission pointed to community-oriented rather than hospital-oriented psychiatry. They emphasized the open-door rather than isolation and seclusion and pointed to the multidisciplinary attack in both research and treatment rather than narrow professional approaches. Since the problem of mental illness is presented as a national, and not merely a local, county, city, or state responsibility, the study implies the mobilization of many more people and many more resources than have previously been considered possible or even advisable in dealing with the problem. The President's message urged Congress to diffuse new energies through the National Institute of Mental Health for the most neglected of health problems in the country.

The call now is to communities and states, as in this meeting, to keep the ferment alive. The federal government is staking out projects for states and communities, which must give the impetus to these activities. Efforts will be needed to people the staffs and increase their personnel. Plans are made, not only to bring the hospitals and mental health facilities into the hearts of the community through new or revamped mental health clinics, but also by corralling mental health resources of nonmedical personnel, such as family agencies, health and welfare organizations, educators, clergy, and volunteer workers.

The communities themselves must be brought into the modernizing, and supporting the already existing mental health facilities, namely the public mental or state hospitals. These need increased support in budgets, public interest, and increased knowledge about them in the community, and an increased number of volunteers.

Scientific knowledge is available to cure

much mental illness and to shorten its course; often its prevention is possible by early treatment. Mental health is not just the job of the public mental hospitals. It is the responsibility of the family, where healthy relationships and habits are first formed, and of the community, where healthy relationships and opportunities for growth and exercise are provided. Or where, by contrast, there may be vast areas of deprivation where the fields for growth are over-ridden with weeds, or strewn with rubble—symbolically speaking—lacking vital relationships on which health thrives. These are human and humanitarian problems, capable of solution in large measure. They require lively leadership, and support by a citizenry interested and enlightened.

All has not been left to the Federal Government or to Federal leadership. A grass roots collaboration is essential to the strength of the health and welfare of the Nation. In review, this has been the *timetable:*

Ferment in psychiatry and the Governor's Conference of 1953-1954.

The Joint Commission formed in 1955 by The Mental Health Study Act of 1955.

President Kennedy's message to Congress in February, 1963, called not just for new plans but for the construction and staffing of comprehensive community mental health centers beginning in 1965, with Federal support for construction and initial staffing. There was an appropriation of over 4 million dollars for planning grants for the states to actually develop mental health programs and to assess the needs and the facilities. There was a 66 million dollar recommendation for the training of personnel.

The First Tennessee Congress on Mental Illness and Health was held in Nashville on November 13-14, 1963. (The first of the state congresses recommended by the American Medical Association.)

Those of us who work in psychiatry are familiar with the vivid and stark thoughts expressed in Wordsworth's *Prelude.*

"Not chaos, not
The darkest pit of lowest Erebus,
Nor aught of blinder vacancy, scooped out
By help of dreams—can breed such fear and awe
As fall upon us often when we look
Into our Minds, into the Mind of man—
My haunt and the main region of my song."

If one is interested in a more harsh or brutal etching of mental illness in our state hospitals let him read Wilfred Owen's *Mental Cases.* Here he describes them sitting in twilight, in purgatorial shadows, in sweltering misery, and adds

"Surely we have perished
Sleeping, and walk hell . . .
These are men whose minds the Dead have ravished, . . .
Wading sloughs of flesh these hapless wander . . .
Rucked too thick for these men's extrication."[3]

Or read Kenneth Fearing's[4] *Confession Overheard in a Subway,* in which he writes of the universal guilt of which we all partake—not least of which is our complacency toward the mentally ill and the often needless suffering of our human kind.

"Look into my eyes, you can see the guilt.
Look at my face, my hair, my very clothing,
you will see guilt written plainly everywhere.
Guilt of the flesh. Of the soul. Of laughing,
when others do not. Of breathing and eating and sleeping.
I am guilty of what? Of guilt. Guilty of guilt,
that is all, and enough. . . .
Now, who will bring Joe Doe to justice for his measureless crimes?
I do not, personally, wish to be involved.
Such nakedness of the soul belongs in some other province. . . ."

The relevance of all this to our Nation and our survival belongs in a perspective of History and Faith which Barbara Ward[5] has sketched.

"The West will prove more vulnerable than any other society if it abandons the pursuit of visions and ideals for, more than any other community, it is the product not of geographical and racial forces but of the molding power of the human spirit. Geographically, Europe is no more than the small Western promontory of the land mass of Asia. It is 'Europe' solely because its frontiers mark the frontiers of Christendom. Racially, the United States is a melting pot of every nation under the sun. Only by force of an idea—the 'proposition' that men are created equal and possess inalienable rights—has it risen to be the most powerful community in the history of man. Both European society and its extension into the New World have been sustained by a unique faith in man—in his freedom, in his responsibility, in the laws which should safeguard him, in the rights that are his, and in the duties by which he earns those rights. So accustomed are we to this view of man that we do not realize the audacity which was needed to bring it into being. At a time when humanity was subject to every physical calamity, when perpetual labor was needed to wring a livelihood from the soil, when the fatalities of tempest and sickness and the general recalcitrance of matter lay heavily upon man's spirit, and when the world, unpenetrated by rational discovery, was a vast unknown—in such a

time, the Greek and Jewish forebears of our own civilization made their tremendous acts of faith in man and in his destiny. They declared him to be the crown of the universe. They saw nature as a field open to his reason and his dominion. The Greeks affirmed his power to build a rational order, the Jews proclaimed him a co-worker in the coming reign of righteousness.

"It was because this picture of man was so high and so untrammeled and its ambition so vast that it led to the discovery of material instruments of mastery, to science and industry and all the material means of our own day. Man is not master of the universe because he can split the atom. He has split the atom because he first believed in his own unique mastery. Faith led to the material achievement, not the achievement of the faith. In fact, now that the means of mastering the environment, of building—physically—a better world, are more complete than ever before, it is a paradox that the faith is slackening. The men of the West believed in man's high destiny and in his power to remold society in a divine pattern more entirely when their physical means were inadequate and their control marginal than they do today when science and industry offer unlimited opportunities of creation. The reason is that the old audacious view of man and of his destiny was sustained only by faith. Reduce man to a creature of his environment, projected from the fatality of birth by anonymous forces on to the fatality of death—then he is ready to surrender his freedom, his rights, his greatness. He is ready for dictatorship and the slave state." . . .

This Conference is most heartening and is moving from the realm of plans to the realm of action. It cannot be accomplished alone by doctors and psychiatrists, it requires the leadership and support of citizens in the states and counties and municipalities of this country. The enlightened leadership of the citizenry is the real nobility and strength of a democracy.

"Civilization, which seemed to our grandfathers so stable and secure, is in fact—on any balanced calculation—experimental, new, and highly precarious."[6] Civilization is not a guaranteed inheritance—it is an experiment and a challenge.

References

1. Ward, Barbara: Faith and Freedom. New York, Doubleday Co., 1958.
2. President Kennedy Address: United Nations General Assembly, Sept. 25, 1961.
3. Williams, Oscar: A Little Treasury of Modern Poetry, New York, Charles Scribner's Sons, 1932, p. 355.
4. Op. cit. p. 642.
5. Op. cit. pp. 264-266. (Ward)
6. Op. cit. p. 15. (Ward)

Remarks of Governor Frank G. Clement*

Dr. Baker, Dr. Billig, distinguished guests and visitors. There are several things unquestionably unique about my appearance here this afternoon.

In the first place, it isn't every two-day gathering that gets its greetings from the Governor just before adjournment on the last day. I want to assure you that the *timing* of my appearance does not in any way reflect on the warmth of my welcome nor my concern for the business that has brought you here.

Another thing that may be unique, maybe an all-time first, is that I do not have a single joke about a psychiatrist or otherwise to tell you. I do not know why most people feel they have to tell jokes at a time like this and, when I consider some of the jokes, it is even harder to comprehend.

Instead this afternoon, I will take the same amount of time to tell you about my trip to Japan! As most of you know, I have just returned from a three weeks tour of Japan and Hong Kong in company with a group of other Governors, and it was a fascinating experience. The Japanese offer a constant revelation, when you have a chance to know them in their own setting and up close, and I would like nothing better than to spend the next thirty minutes telling you about our experiences.

However, I will tell you just one thing which I thought was highly revealing about the Japanese and which might be of interest in this meeting. As you know, they are a very stable, and a somewhat conservative society and the family units are, even in the face of the sweep of modernism, both strong and traditional. They have a lot of

*Read by the Governor of the State of Tennessee at the First Tennessee Congress of Mental Illness and Health, Nov. 13-14, 1963, Nashville, Tenn.

difficulty in understanding America's deification of their children, and I rather think they believe we give our children too much freedom and independence.

As you know, all Orientals talk in epigrams and much of their culture is based on legends and the sayings of their sages, and the Japanese are no exceptions. To me this is baffling and I imagine it would be to most of you. As a lawyer, I can imagine what some of my former law professors would have said if I tried to use old legends and homilies as the Orientals do. You can never run them down, and no two people will quote them exactly the same, and yet they are the basis of a great deal of the moral fibre of Japan.

One of these is the legend about the mother of the sage, which was used to support the Japanese position about raising children. It seems that this woman was left a widow with three small children at an early age, and her only earthly possession was a handsome, comfortable home.

This home was located next to a slaughter-house, and the legend is that she abandoned her home and took her children to live in abject poverty "when she noticed that they were becoming callous to the suffering of dumb animals."

The Japanese are very careful about the influences and stimuli encountered by their children, and the way American families allow children to view the shocking brutality of television drama for hours on end strikes them as dangerous and potentially very damaging. I have been wondering about this myself. It may provoke a smile or two from the physicians here, but I remember our old family doctor telling me when I burned my hand with a fire-cracker that he did not want it to heal over, because it would fester underneath if it healed on the surface first. I am wondering if something like this might be happening to our young people who are protected on the surface with the scar tissue of callous sophistication but may be suffering from a festering deep inside themselves because of things to which they have been subjected.

My wife Lucille, who knows me pretty well, warned me this morning not to come here and start telling some of the most learned men in the world in this specialty of mental health how to go about their practice. It does not seem that her advice did much good. So, for the rest of this short time we have together, I will stick to what I *do* know.

They say that a woman may buy a golf dress and never have any intention of playing golf, or that she may buy a swimming suit and not have any intention of swimming. But when she buys a wedding dress, *she means business!* I am here to publicly re-state that we *mean business* about mental health in Tennessee.

Robert Louis Stevenson said almost a hundred years ago that, "the most priceless possession a human being can have is a quiet mind . . . a quiet mind that cannot be perplexed or frightened, and which goes on at its own steady pace in good fortune and misfortune, like a clock in a hurricane." Tens of thousands of my fellow Tennesseans have not gone to bed with a quiet mind in their adult lives. Their affliction and their suffering now constitute Tennessee's number one health problem, and it is increasing by the day.

I have just seen a shocking statement in the press, that one person out of every one hundred now living in America will attempt to take his life some time during his lifetime. If a law could be passed to banish this darkness of the mind and spirit we call mental illness, I give you my word that the legislature of the State would be in session before this week is out. But there is no such law, and we rely instead on the skills and the learning represented by the men and women in this room. We have reconciled ourselves to a season of failures and frustrations. We know it will be a long war, but we are deeply committed to waging it. We stand ready to offer you every assistance—every weapon a great State can muster when it has been aroused to fight.

Already we have banished the "mad house" and "snake pit" concept of mental care from the scene forever. The money appropriated for mental health and the scope of our commitment are both at a record level. But, as we have said, it is *you* men and women—your knowledge and patient dedication to the unfinished task before us that will bring us the victory. This is what is so tremendously heartening to

me—to see the birth of group undertakings like this one, and I am here to measure, and to learn, as well as to appreciate your determination and high purpose. You have only to know Dr. Baker and his dedicated staff as we know them, to realize how deep is our concern for those who suffer from mental illness.

This is the football season and some of the vocabulary of the game has worked itself into the language. A football team that is victorious—especially over a favored opponent—is said to have "second effort." Maybe that is the best way to express what I feel here in this meeting—"second effort." I cherish few illusions about my own little niche in the pages of Tennessee history, but this is one of those things I would cherish if it could ever be said that through what we did during my administration was through our "second effort," that the "count down" in the final victory against mental illness started here and now—that would be all the monument I could desire in my fondest dreams.

I must close now—I cannot in good conscience take another minute of this precious time you have here together. But with all my heart I thank every one of you for coming. I would like to believe that you have here joined the battle against this ancient scourge of my people of Tennessee.

Thank you.

"What's Happening In Tennessee"*

JOSEPH J. BAKER, M.D.,† Nashville, Tenn.

In attempting to answer the question implied in this title, it is necessary to be quite selective because so many things are going on in the mental health field in our State, and in fact all over the country. Much time could be spent describing our day-to-day attempts to improve the quality of services to our citizens—this involves a constant search for talent, a constant evaluation of new and old ideas, a constant shuffling of personnel to fill key positions, a constant effort to create a first-class service. These things go on all the time. They are part of the every-day housekeeping routine of any big organization, and I will not bore you with details of this part of our operation.

Over and beyond this, however, there are some happenings that are significant and new and worth reporting to you. As an example, we are engaged in a long-range planning effort, which is being supported financially by the National Institute of Mental Health, and to me it seems like one of the most creative uses that federal money could be put to. The reason I say this is that the planning is to be done by Tennesseans, and this should produce a plan which is quite practical and realistic for us. Dr. Leonard Morgan, who is our director of planning, has already set up several task forces, including people from all parts of the State, whose job will be to study and make recommendations on things like mental hospitals, mental health clinics, services for the mentally retarded, and manpower and training. In addition, during the next eighteen months, someone from the planning team will be visiting each of the state's ninety-five counties. The purpose of these visits will be to talk to such people as county judges, school superintendents, welfare people, health officers, and others, to find out how each county handles its problems in mental health and what additional facilities the county representatives think they need. By the time this job is completed, we should have a blueprint of great value because it will contain information and recommendations from the people who live closest to the problems in Tennessee. The whole point of the project is to develop plans that will show us where we should be not just next year, but five years, ten years,

*Read at the First Mental Health Congress, Nov. 13-14, 1963, Nashville, Tenn.

†Commissioner, Tennessee Department of Mental Health, Nashville, Tenn.

even twenty years from now. To me, this is a significant move and one that will involve quite a few of the members of this audience personally.

Another significant move has been a reorganization within the Department of Mental Health to create three new divisions. We formerly had a Division of Hospital Services, and a Division of Community Services which, for a long time, seemed a logical separation of functions. But at a time when we are attempting to break down the old barriers between our hospitals and the communities they serve, it seemed illogical to continue carrying this separation of the hospital and the community into our departmental organization. For this reason, the old divisions were abolished. In their places were established a Division of Services to the Mentally Retarded and a Division of Services to the Mentally Ill. The heads of these divisions will have the responsibility of coordinating the services between the hospital and the community in their respective fields. Both division heads will also have the responsibility of seeing to it that Tennessee gets its full share of the money authorized by the new federal mental health legislation. For Tennessee, during the next four years, we anticipate $1.5 million for the construction of community facilities for the mentally retarded, and $3.6 million for the construction of community mental health centers.

The third new division is the Division of Alcoholic Services. This was established in response to the action of the last legislature which gave us responsibility for the establishment of a program for treatment and rehabilitation of people addicted to alcohol. Mr. Ben C. Liebermann, the director of this division, is working to establish a four-pronged program which will include education, rehabilitation, research and training. We know that it is not enough to treat today's crop of alcoholic people, and that any program which hopes for success must try to prevent alcoholism in any way possible. But, of course, we will provide treatment too. One special ward is already in operation at our Tennessee Psychiatric Hospital and Institute in Memphis. Special wards for alcoholic patients should be in operation at Central State Hospital and Eastern State Hospital shortly after the beginning of the year, and a fourth unit at Western State Hospital several months later. In the meantime, we are helping to support the operation of a couple of community "halfway-houses" for alcoholic patients . . . one in Memphis and one in Knoxville.

Still another important development in Tennessee is the study of our commitment laws, currently being carried out by the Legislative Council. Our commitment practices are still pretty firmly rooted in the nineteenth century, and we find the majority of the hospitalized patients coming to us by way of the courts. We think the court should not be involved in admitting patients to mental hospitals except in cases where the patient must be admitted or detained against his will. The time has passed when patients entering a mental hospital have to be dragged there in strait-jackets. The majority now enter quietly and willingly with the realization that they will be helped. There is really no logical reason why the entry of such people into the state hospital needs to be a matter of court record any more than it needs to be a concern of the court when they enter a general hospital for an operation. We believe that our laws should be modernized in this regard, and the work of the Legislative Council encourages us to hope for change.

These are some of the things that are going on. I wish there were time to tell about many more. We, in the Central Office, have just completed a series of regional meetings in East Tennessee, Middle Tennessee and West Tennessee, to which were invited representatives from each of the hospitals and clinics affiliated with us. In each Grand Division we heard encouraging reports of new projects—a community clinic that, in addition to providing the usual outpatient service, is treating seriously disabled mental patients in the local general hospital, a mental health association that has taken on the project of finding approved foster homes for patients who do not need hospitalization but have no place to go, mental health clinics which are providing consultation to state mental hospitals, new psychiatric wards in general hospitals, a full-time psychiatric faculty at Meharry Medical

College, which we hope will soon be approved for training psychiatrists.

But these things are only a beginning. We are not yet at the point where we can begin to relax. Our public mental health programs are improving through the generous support of Governor Clement and the Tennessee Legislature. In fact, our current biennial budget is increased by 42% over that of the last biennium. Part of this increase was taken up by the operation of new hospitals. However, there was enough left over to make it possible for us to shorten the work day of our psychiatric aides and other hospital employees who had been working twelve hours daily. I am glad to say that they are now all on an eight-hour day for the first time in the history of our hospitals. In addition, we have been able to increase professional salaries in certain categories and to add some much-needed positions to the staffs of our hospitals. The new federal grants recently authorized by the Congress will accelerate our program still further.

But money and administrative support, while they are tremendously important, are not enough. Dollars alone do not create a program. They are not automatically translated into humane and effective care. It takes people to do this, and that is why the rest is up to us, to people like you and me. We must utilize this support in a manner that will actually make a difference in the way patients are treated. In this context, I would remind you that the way patients are treated is just as much a matter for local concern as it is a concern of the state, because people are treated, or mistreated, in our communities long before they are sent to a state facility for help. The mentally ill and the mentally retarded need your action and your concern. Your elderly infirm need nursing homes, some of them need financial assistance to stay in nursing homes, they need good medical and nursing care. Your retarded children need special classes and day-care facilities. Your mentally ill need a chance to be treated locally, either as outpatients or in your local hospitals. We could make an extensive list of things like these that will be available in our communities only when we ourselves are informed enough and concerned enough to act.

A truly comprehensive and effective program to combat mental illness and mental retardation can come about only when we are acting together. I believe we have the beginnings of such joint action in our state, and, referring back to our title, I would say that this is the most important of the many things that are happening in Tennessee.

Closing Summary*

LINDSAY BEATON, M.D., Tucson, Ariz.

Dr. Billig, Ladies and Gentlemen:

I have been assigned the unenviable task of summarizing for you the deliberations of this magnificent Congress. How does one epitomize the Encyclopedia Britannica? It is not even possible, at this late extemporaneous moment, to say anything new. Perhaps this is as it should be. A sophist who had been gone many months from Athens on a tour of the provinces, probably attending philosophical congresses, returned to see the familiar figure of Socrates dominating the agora. "Here you are, Socrates," he jeered, "In the same place, saying the same things." To which taunt the answer was a typical Socratic question, "Don't you ever say the same things about the same things?"

No one can picture the whole rich tapestry of this Congress. He can at most follow only a few of the bright and binding threads. One of them was stressed by Dr. Kenneth Appel—the need for more mental health professionals. An accompanying strand is the practical use of those we al-

*Read at the First Tennessee Congress on Mental Illness and Health, November 13-14, 1964, Nashville, Tenn.

ready have, the overcoming of the cultural lag between present knowledge and its application,—then, the enlistment of non-psychiatrist physicians. And, without abandoning our present facilities, the development of new local services. One essential was underlined in his talk yesterday by Mr. Philip Ryan, the necessary role of the nonmedical volunteer in our joint endeavor. Finally, through all of our deliberations has run an awareness of the cost of what we are doing and what we wish to do. One of the astronauts was asked what his thoughts were in the last few moments before blast-off, as he sat in the capsule at the tip of the rocket that would carry him into orbit, with the fumes of liquid oxygen rising from beneath him. "Well," he answered, "All I could think of was that the hardware under me was every bit furnished by the lowest bidder." Health comes high, as scientific understanding grows. Mental health programs do not come cheap. No one of us wants to sit at the top of a mental health program in which all of the elements have gone to the lowest bidder.

As to Tennessee's plans, I can only say that I came to Nashville already impressed and that I go away humble. Your comprehensive scheme for therapy for the emotionally ill is the most practical, most holistic, most thoughtfully conceived that I have seen, just as this meeting has been the outstanding mental health congress that I have attended. Your funding is strikingly original and successful, but to me even more significant is how you foresee using your monies. The breadth of your blueprints allows for periodic review of progress on the basis of experience gained, for the welcome of new advances, for experimentation, for multiple financing, for strengthening both the private and the public sectors of the care of those who are mentally afflicted. Dr. Elam's description of the unit he is setting up at Meharry is the closest to an ideal psychiatric treatment center in a general hospital in the whole country.

In Dr. Baker's fortunate phrase, you have found and taken the "obvious course." Once launched, steering suddenly does not seem so difficult. There was once a famous ship captain who seemed wise in the ways of the sea past all men. His craft he brought with unerring skill and judgment through all of the treacherous tricks that the oceans can play. But his first officer, seeking the source of the silent old man's mastery, spied on him and noted that at times of crisis he would slip down to his cabin, take a certain book from his shelves, open it to a given page, remove a small piece of paper, read it, and then return to the bridge. Overcome with curiosity, one day the mate crept into the captain's quarters, located the book and the secreted note. With trembling hands he unfolded it. And there he read, "Starboard is right, port is left." Our guidance, our ethic, is also simple: death is bad, life is good; disease is bad, health is good. We can do no other, out of human compassion, than to try endlessly to relieve the agony of our brothers, the mentally ill, so almost painfully brought to our hearts by Dr. Appel this morning in his beautiful and moving address.

I would like to emphasize the part to be played, in the battle against emotional illness, by the nonmedical individual. Dr. Lebowitz, in one of the task-force discussions this morning, said that there is no such person as a layman in the field of mental health. I would more cynically have said that there is no such person as an expert. In either case, certainly the most important people in this hall are the nonprofessionals. At most the professionals can identify and treat the mentally ill. An informed public, however, will hopefully lead to the ultimate triumph, the formulation of an emotionally well society, one that includes a good way of family life, proper education and school atmosphere, awareness of the individual stresses and social forces that create mental imbalance, an environment that will not cause disease but will instead be at once both curative and healthful.

One last brilliant bit, then, in the fabric of this Congress—the hope of mental health, of the prevention rather than just the treatment of psychologic illness. We know what mental health implies—the capacity to test reality adequately, the ability to love, productiveness in one's chosen work, the de-

velopment of a strong conscience system, instinctual gratification without hurt to others. But it is no small job to build these into a living culture.

The attendants are ready to clang the gates on us, and you have been patient. Once, in a hospital where I was trained, a young and inexperienced nurse took a group of patients on a morning walk. A bird overhead with uncanny accuracy deposited a gift on the bald head of a long-term schizophrenic. This was an emergency for which the nurse had not been prepared by her instructors, but, after a flustered few seconds of doubt, she ordered her charges to stay where they were and dashed into the nearest building. When she emerged with a roll of toilet paper in hand, one patient muttered to another, "*She's* crazy. That bird must be miles from here by now." Many of *you* should, I know, be miles from here by now.

Still, I cannot adjourn this Congress. I declare it not closed but open. We have been engaged not in two isolated days of work but in a segment of a continuing, open-end effort. To each of you, my new friends, I can personally only say that the hopes of the mentally ill go with you and that, in a larger sense, the truest of the future goes with you. Goodbye; God bless you.

HEMODYNAMIC STUDY OF AORTIC INSUFFICIENCY.* Bloomfield, D. A., Nashville, Tenn.

Aortic insufficiency was first described by William Cowper, the anatomist, in 1705. Although the clinical features of the lesion have been well recognized, the actual hemodynamic disturbances had not been elucidated until the development of technics which could measure the regurgitation.

The most accurate method depends on the recovery of indicator dye from the left ventricle following injection of the dye into the base of the aorta. The quantitation of the insufficiency is determined from the ratio of the dye concentrations in the left ventricle and a peripheral artery. The dye curves are drawn from a transseptal catheter and a retrograde aortic catheter, both introduced by the percutaneous technic.

The information gained in this way has not only been of inestimable value in selecting patients for surgery but has enlightened the understanding of the hemodynamics.

The recognition that the tremendous work-load imposed on the left ventricle by regurgitation is considerably greater than with the same degree of stenosis, explains the rapidity of the patients' deterioration once heart failure eventually occurs.

The accurate calculation of the aortic valve orifice from the catheter data has shown that considerable systolic pressure gradients can be present across the valve when the lesion is massive insufficiency without any stenosis.

The most practical application of this work is in the ability to define aortic valve lesions so that safer, planned corrective surgery can be undertaken.

**To be read in part at the Annual Meeting of The Association of American Physicians, on May 5, 1964, at Atlantic City, New Jersey.*

STAFF CONFERENCE

John Gaston Hospital*

Transverse Incision in Gynecology

DR. PHIL C. SCHREIER: We have a patient today who presents an interesting problem from the viewpoint of judgment and management. She was transferred to the Gynecology Service from the Medical Service. Dr. Leon Banakas, Chief Resident, will present the patient's history.

DR. LEON T. BANAKAS: This is the case of a 52 year old colored woman, nullipara, approximately 2 years postmenopausal who was first referred to the Gynecologic Clinic from the Medical Clinic for evaluation of a large pelvo-abdominal mass. Her past history revealed that she had had three previous hospital admissions. The first, in 1952, was for acute pelvic inflammatory disease. Pelvic examination then revealed a large tender fluctuant mass, in both adnexa and the cul-de-sac, which extended two-thirds of the way to the umbilicus. She was treated with antibiotics and responded well. She was hospitalized again in 1955 for another episode of acute pelvic inflammatory disease and again responded to medical therapy. In 1961, the patient was hospitalized for the third time. She was admitted with a history of lower abdominal discomfort. Pelvic examination revealed a pelvo-abdominal mass about the size of a 7 months gestation. The mass was described as movable and nodular giving the impression of uterine fibroids. Medical consultation was obtained because of hypertension, and it was thought that the patient had hypertensive vascular disease. Because she was considered a poor surgical risk, the gynecology staff was of the opinion that surgical exploration was not justified at that time. She was therefore discharged and was not seen again until September, 1963. At that time she was referred to us from the Medical Clinic, complaining of epigastric discomfort following meals, left anterior chest pain, marked dyspnea, and severe orthopnea especially on reclining after meals.

Physical examination revealed a well developed, extremely obese colored woman weighing 267 lbs., with a B.P. of 200/120. Abdominal examination revealed a large abdominal mass extending almost to the xyphoid. The obesity was accompanied by a large apron of fat which extended to the symphysis pubis. The impression in the Department of Medicine was that the patient had hypertensive vascular disease and obesity. They thought her symptoms were due to the pressure on the viscera and diaphragm by the large pelvo-abdominal mass. She was admitted to the hospital on the Gynecologic Service Oct. 21, 1963.

DR. JOHN Q. ADAMS: Had the medical staff studied her radiologically with hiatal hernia in mind?

DR. BANAKAS: No sir, not at that time. The admission blood pressure was 226/130, pulse 76, respirations 24, temperature 98.0°, and weight 267 pounds. Examination confirmed an extremely obese abdomen and a large, term size abdominal mass. Pelvic examination revealed normal external genitalia, the introitus was marital, the vagina was pink and supple, and the cervix was not visualized because of its extreme anterior position. It was palpable, however, and was small and flush with the vaginal wall. It was impossible to sound the uterus. Bimanual examination revealed a large mass which arose from the pelvis and extended to the costal margin. It was described as firm, nontender and fixed by its size. There were components of the mass palpable anteriorly and in the cul-de-sac. The cervix moved with the mass. The impression was uterine leiomyomas.

DR. SAM P. PATTERSON: Did the laboratory studies add any significant findings?

DR. BANAKAS: The chest film was normal. The abdominal film revealed a 12 x 8 cm. mass in the left upper quadrant with calcification. There was marked displacement of the colon, high on the right, and the radiologist also noted a deformity of the left hip described as coxa malum senilum. Barium enema indicated extrinsic pressure on the distal portion of the sigmoid. An intravenous pyelogram showed prompt function bilaterally. The hematocrit and urinalysis were within normal limits as were the electrolytes. An EKG. revealed left ventricular ischemia, and a urine colony count was normal. The patient was thought to be a fair operative risk at that time and was cleared for surgery by the Department of Medicine.

DR. SCHREIER: Dr. Banakas, you have been very discrete and polite in not calling our attention to a note in the patient's chart dated March 20, 1961 and signed by me. It says: "We agree with the physical findings but regard the obesity and hypertensive vascular disease of such extreme nature as

*From the Department of Obstetrics & Gynecology, University of Tennessee College of Medicine, Memphis, Tenn.

to make this patient a very poor surgical risk. Although the possibility of ovarian neoplasm is considered, we do not think the patient should be subjected to surgery and I recommend that she be discharged."

DR. LOUIE C. HENRY: Dr. Schreier, I agree with you that this patient in 1961 did represent a Herculean task from a purely mechanical viewpoint and also that the hypertension and obesity made her a poor operative risk. However, in dealing with our clientele over the years we have had very poor results in postponing surgery for large pelvo-abdominal masses and pelvic inflammatory disease. The day of reckoning is coming in most of these patients and hypertension and obesity do not improve—on the other hand, they worsen as the days go by. We have practically no success with weight reduction, and medical treatment of hypertension leaves much to be desired.

DR. ADAMS: There certainly is a greater tendency to operate on the aged and infirmed patients today than there was a decade ago. We seldom find a patient now with a true medical contraindication to surgery. Patients are operated upon who formerly would have been considered poor operative risks. In view of this, perhaps a reconsideration of this patient's status is in order and perhaps with present anesthesia technics this patient can be operated upon safely.

DR. PATTERSON: It seems that we have made a rather definitive clinical diagnosis already. The history shows that she has substantiated pelvic inflammatory disease in the past, that she has had a pelvic tumor that has progressively increased in size. It certainly could be of ovarian origin but I know of no additional tests that should be done prior to laparotomy.

DR. MARTHA LOVING: Was there any calcification noted in the masses on x-ray examination, and were the findings compatible with uterine fibroids?

DR. BANAKAS: There was calcification noted in the left upper quadrant. The radiologist considered the possibility of a renal tumor, but an I.V. pyelogram was negative.

DR. HENRY TURNER: Dr. Carroll had pointed out several times in the past that the calcification in fibroids to the experienced observer presents a feathery type of opacity, and I suppose that was not so in this case since he did not suggest it in his radiological report. The negative pyelogram eliminates a renal tumor. If a 12 x 8 cm. calcified renal tumor were present, there should be more urologic findings.

DR. LOVING: Although this tumor has become larger over the past two years. its growth has not been as much as one would expect with an ovarian malignancy.

DR. P. A. TURMAN: It seems to me from the presentation to this point that we are in all probability dealing with a massive benign pelvic tumor, most likely a myoma of the uterus, with the possibility that it is a benign ovarian neoplasm. I doubt seriously that there is any other diagnostic procedure that would further clarify the case. I think at this point we must make a decision regarding surgery. Certainly an operation would be advised with extreme caution and a guarded prognosis since this case was turned down for surgery two years ago. If she has symptoms at the present time which the medical department thinks are directly related to the pelvic tumor, it seems we have no other choice but to operate.

DR. ADAMS: Dr. Banakas, did we understand correctly that the staff of the medical department believes all of her symptoms are attributed to the size of this tumor?

DR. BANAKAS: Yes sir. There was not thought to be any element of cardiac decompensation.

DR. TURNER: All of us realize that besides the technical difficulty involved at surgery and the possibility of medical complications, there is the problem of postoperative healing. With a tumor this large in a patient this obese one readily realizes that the long vertical incision required might heal quite poorly and might be complicated by wound dehiscence and breakdown which could lead to eventual demise even though the operation itself was a success. I think we are going to have to discuss in more detail the operative management of the case if we have reached the decision that operation is definitely indicated and we are willing to take on this terrific job.

DR. SCHREIER: Dr. Henry, as was hinted earlier by Dr. Adams, since the patient was turned down two years ago, we have be-

come aware of certain protective measures regarding such stupendous operative challenges. One, of course, is improved anesthesia. The other we have successfully employed is the transverse incision to avoid incising through this tremendous apron of fat. We are interested in knowing the future of these patients who are such poor operative risks and in knowing if the newer technics are associated with a reduced mortality.

DR. HENRY: Having been here at the John Gaston for quite a while and having had some very humbling surgical encounters with extremely obese women, I have come to be a disciple of those who advocate the transverse incision for pelvic laparotomies, particularly for very obese patients. This patient has a tumor that is described as term size, and this even makes one who advocates the transverse incision a little shaky as he views such a momentous problem.

DR. MORTON GUBIN: The question you raise is can one approach a tumor that is way out of the pelvis through a transverse incision which is usually more adaptable to tumors confined to the pelvis?

DR. HENRY: All of us realize that if the incision is extended far enough, any size intra-abdominal tumor can be removed using the vertical incision. The vertical incision, as Dr. Turner points out, would lead us in this case through several inches of fat which would heal poorly and which would tend to roll off the side of the bed postoperatively. We may expect less than satisfactory healing with a good possibility of wound dehiscence, an event which in a patient of this type would be tantamount to death.

DR. ADAMS: Dr. Henry, what do you mean by transverse incision? How would you go about making such an incision on a patient like this?

DR. HENRY: As you know, in every woman who is extremely obese there is in the lower abdomen a crease beneath the panniculus adiposa. This crease extends roughly from one anterior superior iliac spine to the other. It is here that the incision is made transversely through all layers, including the peritoneum. Then with Trendelenberg positioning and with only moderate retraction, ordinary pelvic operations can be performed with much greater facility than they can be with other types of incisions. I am speaking now in particular of the obese patient, but this applies also to the patient of average build.

DR. BETTY SCHETTLER: Are you referring to a Pfannenstiel incision, Dr. Henry?

DR. HENRY: Pfannenstiel incisions have been used here for years, but this differs from what I have in mind. With the Pfannenstiel incision the anterior rectus sheath is reflected superiorly, the rectus muscles are retracted laterally and the peritoneum incised vertically. What I have in mind for this patient is an incision which gives much more exposure than the Pfannenstiel. The rectus sheath should be cut transversely and the rectus muscles should be transected approximately two inches above the point of attachment to the symphysis. The peritoneum is then transversely incised. This gives a tremendous amount of exposure.

DR. ROBERT P. KLINE: Dr. Henry, you failed to include in your description of the incision one of the most intriguing aspects in preparing the patient for surgery. Namely, the technic of suspending this large fat pad or apron prior to incision. Why don't you tell us a little more about this preliminary step?

DR. HENRY: It is not my technic but has been used here at the John Gaston for years for obese patients. It simply utilizes large strips of adhesive tape on this panniculus adiposa. This panniculus is strapped, as it were, to the rod which we commonly call the "ether screen," the crease beneath the panniculus is stretched out, and the large fat pad is held well out of the way for the operative procedure. (Fig. 1.)

DR. SCHREIER: We are now ready to employ all of the measures accumulated for dealing with this type of problem. I concur that this patient needs all of these protective mechanisms and would go along with employing the transverse incision described.

DR. HENRY: This patient was operated upon using a general anesthetic and the preoperative preparation included suspension of the panniculus adiposa to the ether screen with wide adhesive strips. The in-



FIG. 1.

cision extended transversely from the anterior superior spine on the left to the same point on the right through all layers. Upon entering the abdomen a tremendous mass of pelvic inflammatory disease and fibromyomas was seen. The largest fibroid was probably 15 cm. in diameter and was nestled in the left upper quadrant of the abdomen. This was attached to the uterus by a long pedicle and was removed after ligation of the pedicle. Exposure was entirely adequate for removing this pelvo-abdominal mass which was of about 7½ months gestational size. Multiple nodulations of fibroid tumors were present, and the adnexal structures were completely obscured by adhesions. The ovaries and tubes were plastered to the sidewalls of the pelvis, to the anterior surface of the sigmoid and to the posterior surface of the broad ligaments. The operation went very easily, and it was possible to perform a total abdominal hysterectomy and bilateral salpingo-oophorectomy according to the technic of Richardson within three hours. The only difficulty encountered was dissection of the adnexal structures. The abdominal closure was in layers. A simple running chromic suture was used on the peritoneum, and the rectus muscles were not sutured together. The anterior rectus sheath was closed with interrupted suture of 00 silk. Two rubber drains were left in the incision, one anterior to the fascia and one beneath the fascia. The fat and the skin were closed with interrupted silk sutures.

DR. LARRY BROWN: How thick was the subcutaneous fat at the point of incision?

DR. HENRY: The fat was about three inches thick. This is much thinner than it would have been in the higher portions of the abdomen which would be involved in a longitudinal incision.

DR. PATTERSON: Obese patients with longitudinal incisions have been closed with wire. Was this necessary? Is this necessary with the transverse incision?

DR. HENRY: According to the article which really aroused my interest in the transverse incision wire is not necessary. This article by Daversa and Landers is entitled "Physiological Advantages of the Transverse Incision in Gynecology" (Obst. & Gynec. 17:3, 1961). According to this article it takes 30 times more strength or tension to close a vertical incision than it does a transverse incision. What I am saying is that the transverse incision practically holds itself together by virtue of the fact that this is a transverse opening made through fibers of fascia that run the same way. It has not been the practice here to place wire sutures in the transverse incision for the simple reason that we have had practically no difficulty with wound dehiscence and evisceration.

DR. ADAMS: One thing that has always bothered us has been the fear of having weakness in the abdominal wall as a result of having cut the recti muscles. Did I understand you to say that you do not sew them back?

DR. HENRY: I believe Dr. Don Berry, one of our residents, has had some experience with this and I would like for him to comment on the subsequent follow-up of these patients regarding weakness in this incision.

DR. DONALD M. BERRY: Dr. Adams, first of all I would like to mention one principle of the anatomy here, and that is that the rectus muscles are segmental muscles held together by tendinous bands. The anterior rectus sheath is adherent to the rectus muscles, so when the rectus muscle is cut the anterior rectus sheath is cut and there is very little or no retraction of the rectus muscle. Thus, when the abdomen is closed, all that need be done is to approximate the anterior rectus sheath. These muscles will actually heal by the formation of another tendinous band. In patients followed for a year or more we have detected no weakness in the abdominal wall. I know

of one patient who was operated on the second time for cesarean section after the first operation was through a transverse incision. The muscles had to be cut again. It could not be determined where they had been cut previously.

DR. TURNER: I have had occasion to go through a transverse scar as many as three times and have always found complete integrity of the previous scar. The other thing that has been very pleasing to find is that it is actually easier to go back through a transverse incision the second or third time than it was the first time. There seems to be less bleeding. One can easily identify all the structures of the anterior abdominal wall.

DR. TURMAN: Do you encounter excessive bleeding when the rectus muscle is transected?

DR. BERRY: No sir, we have found that if the rectus muscle is incised slowly the few bleeders can be easily clamped as the muscle is incised. Of course, there is one point that is very vascular and that is at the inferior epigastric vessels. These vessels are on the inferior lateral aspect of the rectus muscles. These can be easily separated from the rectus muscle and isolated for ligation. Anastamoses are rich in this area, and there are no ill effects from clamping these vessels. We isolate and ligate these vessels as a separate and distinct part of the surgical technic.

DR. SCHETTLER: Dr. Banakas, how did this patient convalesce?

DR. BANAKAS: The patient had a very nice convalescence. She sat on the side of the bed on the first postoperative day and walked on the second day. The postoperative stay was of 10 days and she had no complications.

DR. PATTERSON: Therefore, it seems that we have brought to bear in this patient, who was a poor surgical risk, all the knowledge we have gathered in dealing with the extremely obese patient and emphasized that instead of cutting through this big apron of fat we circumvent it and cut through a layer of fat about half as thick.

DR. HENRY: We utilize the advantages of making an incision along the fibers of the tendons of the anterior abdominal wall muscles rather than going transversely across their tendons. The physiologists teach that the immediate support of the anterior abdominal wall is actually the point of attachment of the flat muscles of the abdomen. We wouldn't think of going transversely, for instance, across the tendon Achilles. We would go between the fibers.

DR. ADAMS: Since this transverse incision prolongs operating time when compared with a longitudinal incision, how is it justified in a poor risk patient?

DR. HENRY: I agree it does prolong the operating time and in the average patient we can enter the abdomen more quickly using a vertical incision. In this particular huge abdominal wall I'm not at all certain but that the entry time was less using the transverse incision. In any event, if it does require longer to enter the abdomen by transverse incision, the advantages which accrue are far more than would be required to offset the disadvantages of say 20 minutes prolongation of operating time.

DR. SCHREIER: It is evident from our experience that the modern training for abdominal and gynecologic surgeons should include adequate opportunity to perfect and extend the use of the transverse incision particularly in the extremely obese patient.

CLINICOPATHOLOGIC CONFERENCE

Vanderbilt University Hospital*

Hodgkin's Sarcoma

This 50 year old white farmer was admitted for the second time because of a C.C.-"skin rash."

First Admission. (Aug. 3-24, 1950.) He had been in good health until 3 months before admission when, while cleaning a bass, he apparently cut the dorsum of his left hand. Subsequently, he developed redness, swelling, and lymphangitis of the left hand and arm. He then noted a tender left axillary enlargement. He was treated with penicillin and sulfa and developed an urticarial eruption. The sulfa was stopped and the penicillin continued for 3 weeks. However, the pruritus remained and he scratched constantly with lesions appearing on his skin thereafter. Other symptoms included a 40 lb. weight loss, anorexia, malaise, and daily temperature elevation to 101°-102°.

He was evaluated at a local hospital for 4 weeks without a definite diagnosis. Biopsy of a left axillary node revealed "chronic inflammation." He was treated with streptomycin and chlortetracycline (Aureomycin) without improvement.

He had been in contact with numerous types of animals and drank raw milk. He had been a heavy whisky drinker.

Examination. B.P. was 145/87, P. 88, T. 101.6°. He presented as a thin, drawn, miserably chronically ill man scratching constantly. Scattered over his extremities and trunk were excoriated red, crusty papules most numerous over his legs. A spotty pigment was left where lesions had disappeared. Only one large, firm nontender node was felt in the left axilla. The chest and heart were normal. The abdomen was tense, with a "doughy feeling," and slight tenderness in both upper quadrants. No organs (increased splenic dullness) or masses were felt. A tender enlarged prostate was noted, otherwise the examination was unrevealing.

Laboratory Studies. Urine showed occasionally a pyuria and was negative for Bence-Jones protein. Hgb. was 11.4, PCV. 38, WBC. 8,700 with 77 P.M.N., 1 P.M.E., 19 Lymphs., 2 Monos. Platelets were adequate; E.S.R. was 47/30; prothrombin time 37%, cephalin flocculation was negative, thymol turbidity 5.4 units, BSP. retention 3%, Albumin-globulin ratio was 2.8-2.9/3.4-2.5; fasting blood sugar was 82 and N.P.N. 31 mg.%. Kahn was negative, uric acid 4.7 mg.%, stool was negative for blood. Bone marrow aspirate was normal. Febrile and cold agglutinations were negative. Urine culture grew out Proteus, *Staph albus, E. coli.* Blood, bone marrow and mesenteric node cultures for routine, acid-fast organisms and fungi were negative.

X-ray examinations of the chest and abdomen were negative. *EKG* was normal.

Course. He had a febrile course with temperatures ranging from 100° to 102.6°. On Aug. 16, 1950, at laparotomy the spleen was slightly enlarged but normal in consistency and not nodular. The liver was not described, but innumerable soft, yellow nodes of from 5 mm. to 2 cm. in size were found. A 1 cm. node was removed and on microscopic study was interpreted as "chronic lymphadenitis," with some disagreement among the pathologists, one of whom thought that it was consistent with, but not diagnostic of lymphoma. A skin biopsy revealed also "chronic inflammation." Postoperatively he continued febrile and grew progressively weaker. He was discharged to be readmitted at a later date.

Final Admission. (Sept. 21-24, 1950.) In the interval he had gradually declined and been bedridden. The pruritus had abated somewhat, though he continued to be febrile. He was readmitted for ACTH therapy.

Examination. T. was 102°, P. 128, R. 40, and B.P. 110/70. He was weak, lethargic, emaciated and was fatigued after merely talking. Axillary and pubic hair were sparse. Several small firm matted nodes were felt in the left axilla. There was 2+ pitting edema of the legs. Coarse dry inspiratory rales were present in the right lung base. The remainder of the examination was unchanged.

Laboratory Studies. Urine was negative. Hgb. was 9.4 Gm., RBC. 4.2, PCV. 44, WBC. 17,550 with 73 P.M.N., 3 P.M.E., 23 Lymph., 1 Mono., and normal RBC. and platelets. The ESR. was 37/10, A/G ratio 2.2/2.6, FBS. 78, N.P.N. 35 and Cholesterol 110 mg. per 100 ml.

Course. Biopsy of a left axillary node was done on Sept. 23. Apparently sections revealed only acute inflammation without any lymph node present. He remained febrile to 103.4°. On Sept. 24 he was found with a weak pulse and tachypnea, but was responsive. He was able to moan in his usual manner. One hour later he was found dead.

R. M. HEYSSEL: This 50 year old white male farmer was said to have been a heavy whiskey drinker. He also drank raw milk and was in contact with numerous types of animals. He was admitted to Vanderbilt Hospital for the first time in August 1950, after a prolonged stay in another hospital where extensive study did not determine the cause of the illness.

This apparently started with an infection of his left hand acquired while he was cleaning fish. We need to decide at the

*From the Departments of Pathology and Medicine, Vanderbilt University School of Medicine and Vanderbilt University Hospital, Nashville, Tenn.

outset whether the cleaning of a bass, a fresh water fish, could have been the primary event in the illness of this man which eventually terminated in his death. A diagnosis considered by the physicians caring for this man was Erysipeloid of Rosenbach. This disease, usually of a localized nature, is characterized by redness and swelling of the site of infection and adenitis of regional nodes. It is characteristically associated with abbatoir workers and fishermen, particularly those dealing with crabs and crustaceans of a wide variety. It is caused by the organism which also causes swine erysipelas, *Erysipelothrix rhusiopathiae,* a gram-positive nonsporulating organism. Occasionally and rarely the disease does become generalized with generalized lymphadenopathy, skin rash, septicemia and death.

This man may have had an erysipelothrix infection initially, but more likely he had a localized staphylococcal or streptococcal infection at the site which he abraded while cleaning fish. It isn't likely that he died of generalized erysipelothrix infection. The disease is extremely rare and the rash does not look like the rash that this man had. It is supposedly nonpruritic and is primarily petechial and purpuric. The organism itself is sensitive to penicillin and tetracycline. This man was treated with both. In consequence I think we can rule out generalized *Erysipelothrix rhusiopathiae* infection as a cause of this man's entire illness. I do not believe that cleaning a bass relates to the man's overall illness. The bass is probably a "red herring."

The story in its essentials, then, is that of a disease terminating fatally after 5 months, which had been manifested by extreme pruritus, constant unremitting fever, weight loss, cachexia, and death. The laboratory data both on his first hospital admission and his subsequent admission to Vanderbilt is primarily of a negative nature. There is no point in reviewing it, but we will mention the laboratory work as we go because as negative data, it does have great value.

There are, in my view, three cardinal facts which we should scrutinize closely. The first is the intensely pruritic skin rash, the second is fever, and the third is the axillary and abdominal lymphadenopathy.

The itching in this case was certainly unusual. There are degrees of itching ranging from that caused by minor localized areas of pressure on the skin, from tight clothing for instance, to minor contact dermatitis to areas of neurodermatitis and on up to the intense kind of generalized itching that this man manifested. Itching has actually been classified into categories depending on severity. These are *obligate itching, facultative* itching and nonitching disorders, or if you will, optional itching disorders—you can either scratch or not depending upon how you feel about the matter. Obligate itching is the category we need to consider. This implies that the patient has to scratch, that he really can't avoid scratching, that itching keeps him awake at night. He often almost literally attempts to tear his skin off because of the extreme discomfort. It is worth referring in this regard to a note describing this man's appearance by Dr. Tillman, the medical resident at that time, who said the man was excoriated every place he could reach and that he could actually tell he was left handed as he was not abraded on his right lower chest posteriorly. Mite infestation, various kinds of contact dermatitis such as poison ivy and poison oak, urticaria and toxic eruptions from drugs, severe neurodermatitis, uremia, lichen planus, and lymphomas and malignant neoplasms are all causes of such severe pruritus. Among these disorders, it would seem to me, the only ones likely to fit into what this man had would be those associated with drug reactions and the malignant lymphomas and neoplasms.

The second most striking aspect of the man's illness was fever. This really was fever of unknown origin (FUO). As a matter of fact, the man went to autopsy without a defined cause for his fever. There have been many articles written about fever and many about so called "Fevers of Unexplained Origin." The most current such article appears in the journal "Medicine" in 1961 by Petersdorf and Beeson. They reviewed 100 consecutive cases of *Fever of Unknown Origin.* They defined these as fevers in which there was no clearcut clinical diagnosis and which had persisted for at least three weeks. Of those 100 cases, it is

pertinent to point out that 10% came to autopsy undiagnosed. Of the 100 cases, 36% were due to infection. Ten of those due to infection were specifically due to tuberculosis and 5 to subacute bacterial endocarditis. Another 19% were caused by obscure neoplastic disease, and 13% were due to collagen disorders. The remainder were due to a wide variety of febrile illness, but no great number in any one classification.

The third manifestation of the man's disease was lymphadenopathy. Again this has a wide variety of causes. The causes of axillary and abdominal node coincide with the illnesses we named with regard to fever and include in addition at least two causes of severe obligate itching.

I believe we can narrow the illness down from the foregoing considerations to several general classifications of disease. The first would be infections: subacute bacterial endocarditis; brucellosis as this man was a raw milk drinker; tuberculosis, simply because it is one of the more common causes in the series of Petersdorf and Beeson; histoplasmosis or other fungal diseases, since we cannot distinguish these from tuberculosis and because we live in an endemic area of histoplasmosis; Erysipeloid of Rosenbach which we have already discarded; and finally pyelonephritis, because of the positive urine cultures in the protocol,—all would be possibilities.

The collagen diseases or diseases of collagen are high on the list. Periarteritis nodosa is of particular interest because of the history of sulfa intake. The possibility of lupus erythematous is similarly enhanced because of the question of the penicillin reaction. Malignant diseases are the final category and would include either lymphomas or metastatic carcinoma.

In general, I believe it is possible to eliminate as unlikely most of these suggested diagnoses. Subacute bacterial endocarditis is unlikely. The patient never had a cardiac murmur; there were at least 10 negative blood cultures; there was no evidence of peripheral embolism at any time, and the urinary findings were not characteristic of this disease. Brucellosis can be excluded because the agglutination titre was negative on several occasions and there were negative cultures of blood and bone marrow for Brucellae. Death and a syndrome of severe itching would both be unusual in this disease.

It is more difficult to eliminate tuberculosis or histoplasmosis. Skin tests were not done. There were no gastric aspirates for acid-fast organisms for culture and, in fact, the only culture done for tuberculosis or histoplasmosis was from the abdominal node which did not show histologic evidence of granulomatous disease. Our bacteriologic evidence then does not rule out these possibilities. While the chest x-ray was negative until the last month of illness, we unfortunately do not have a second chest x-ray at the time of his final admission to the hospital. A negative chest x-ray does not controvert the diagnosis of miliary spread of tuberculosis or fungal disease. The patient received streptomycin for an unknown period apparently without a change in his fever course. I doubt that he had tuberculosis or histoplasmosis, or other disseminated fungal disease, although on the basis of the data that we are given we cannot absolutely exclude these diagnoses. Severe pruritus is most unusual in both diseases, and the skin rash was certainly not characteristic of disseminated tuberculosis or fungal disease.

The physicians taking care of this man did consider pyelonephritis and/or renal abscess in the differential diagnosis; the six cultures which contained *Staph albus* at another hospital probably represent contamination of the urine. *E. Coli* and proteus organisms were cultured from his urine at Vanderbilt. At the time of the positive cultures, the urine did not show pyuria, and we do not have quantitative cultures of these organisms. The urine culture was never repeated and he did not receive treatment. It is difficult to assess the significance of this finding. His prostate was said to be enlarged; at no time did he develop flank tenderness or pain. It would be most unlikely that pyelonephritis could explain the entire course of the illness in this man.

The most likely of the collagen vascular disorders clinically would be periarteritis nodosa or lupus erythematous. Periarteritis has been associated with reaction to sulfa or hypersensitivity reactions of various types for many years. This man's ma-

jor difficulty seemed to start following the exhibition of sulfa and penicillin for his original hand infection. For various reasons, we can rule out or exclude the diagnosis of periarteritis nodosa, although the physicians taking care of him considered it very likely, and, as a matter of fact, his final admission was to give ACTH therapy for a collagen vascular disorder. Until the time of death he had not developed hypertension or renal failure. He never manifested the urinary findings, that is, casts, numerous red cells, or albuminuria which one would expect in a generalized vascular disorder. He had never had abdominal complaints or cardiac complaints, both of which are very common in periarteritis. He never developed arthritis or muscular pain; he never had central nervous system findings; and he developed no subcutaneous nodules. As far as lupus is concerned, the skin manifestation was certainly not typical. He never had joint or serous membrane involvement, there were no renal lesions or urinary findings, no central nervous system or peripheral nerve lesions. No LE preparation was done, but this patient died in 1950 and lupus preparations were only introduced in 1948. I believe it would be unlikely for a person to die of periarteritis or lupus without ever having manifested any of the hallmarks of the disease.

Malignant diseases, either disseminated carcinoma or lymphomatous disease, cannot be dismissed as summarily as the aforementioned diseases. The patient had a wasting febrile illness and adenopathy was the only finding at exploratory laparotomy. It is bothersome, to say the least, to know that three node biopsies were done without a specific histologic diagnosis, if indeed the man did have a lymphoma or carcinoma. It is of note, however, that there was reticulum cell hyperplasia seen in the abdominal node, and one pathologist felt at that time that the node was consistent with, but not diagnostic of a lymphoma. The node taken from the axilla at Vanderbilt on his last admission really was mostly fat which I believe shows only residual evidence of the old excisional biopsy done earlier from the same site. A node was not definitely found in the fatty tissue on the last biopsy. Really then there is only one node biopsy available and this one was actually equivocal. The bone marrow was not available for review and no report exists in the chart. Marrow aspiration is a poor way to diagnose lymphomas in general and probably this would have been of no value. The material we have to deal with does not exclude a lymphoma. As a matter of fact, the inability to make a positive diagnosis of lymphoma after one or more adequate biopsies, is not unusual. A cursory survey of members of the Department of Medicine here suggests that on occasion multiple biopsies may be necessary and this problem is commented on repeatedly in the literature.

Pruritus was an outstanding feature of this case. It may well have been due to a drug eruption initially and this may have been the sole cause of persistent dermatitis with itching at the time of death. Pruritus of this degree and this duration is nevertheless more consistent with malignant disease and is peculiarly consistent with primary malignant disease of the lymphatic tissues. The absence of generalized enlargement of peripheral nodes, an enlarged liver and spleen is unusual in lymphomas but not unheard of in abdominal or retroperitoneal node involvement with Hodgkins or reticulum cell sarcoma. The unremittent fever is not classic, but Murchison-Pel-Ebstein fever occurs in only 10% of cases. The mild anemia and hypoalbuminemia is consistent. The lack of eosinophilia is not bothersome. This finding actually is not usual in Hodgkins disease. Only a few cases show marked eosinophilia. The presence of eosinophilia would be of little help since this is also characteristic of drug reactions, of periarteritis nodosa, and indeed most of the other illnesses we have been considering.

The rapid course of the disease, only 5 months from the onset of symptoms to death, is not characteristic of lymphomas in general. Hodgkins paragranuloma and granuloma usually have much longer clinical courses than this; however, Hodgkins sarcoma, a histologic picture marked by hyperplasia of reticulum cells and by the appearance of cells which look like Reed-Sternberg cells, and reticulum cell sar-

coma, which histologically is quite similar to Hodgkins sarcoma, often have a very rapid course. Patients with these two types of lymphoma usually have a severe illness and often die within less than a year. In one series of 17 patients with this diagnosis, most were dead within one year and many were dead within a period of 3 months. It is likely that if this proves to be a lymphoma it will probably be classified as either Hodgkins sarcoma or reticulum cell sarcoma, depending solely on the presence or absence of cells which may be classified as Reed-Sternberg cells.

The final terminal event is difficult to delineate. We have no specific reason for this man's death, and there is little basis for speculation in the chart. It may be that at autopsy no single cause of death was found. This would not be surprising in Hodgkins disease of any type, and certainly not reticulum cell sarcoma or Hodgkins sarcoma. Presumably he had a terminal episode of shock. We do know that he did have a gram-negative organism in his urine at one point in his hospital course. It is conceivable that he died terminally of gram-negative septicemia and endotoxin shock.

I believe this man died of a malignant lymphoma which will be classified histologically as either Hodgkins sarcoma or reticulum cell sarcoma. The terminal event is uncertain clinically, and may not be certain even after postmortem examination.

DR. JOHN L. SHAPIRO: First I should like to comment concerning the necessity of doing a biopsy on lymph nodes on more than one occasion to obtain an unequivocal diagnosis of malignant lymphoma. All of us recognize that multiple lymph node biopsies may be required on occasion for absolute diagnosis. There are two reasons for this. First, there may not be involvement of a particular node and secondly the involvement may not be absolutely diagnostic. We require unequivocal findings before making the interpretation of malignant lymphoma in view of the dreary prospect that it carries with it. I might emphasize this by saying that I had much rather err a dozen times on the side of conservatism than make one erroneous diagnosis of malignant lymphoma.

The differential diagnosis in this particular case rests between the two types of lymphoma which Dr. Heyssel mentioned in his discussion. Some features suggest strongly the diagnosis of reticulum cell sarcoma while others suggest Hodgkin's. I prefer the latter diagnosis though would not argue the point to any great length.

Let us review the sections which were obtained from the tissue removed at surgical exploration first. The section of skin shows a nondescript type of lesion with a crusty papule but no infiltration in the corium to suggest lymphoma. It is said, and with truth, that more of the skin lesions associated with Hodgkin's are nonspecific than specific and I concur in this opinion. The sections of lymph nodes removed at surgical exploration show suspicious features. I would point out the splattering of lymphoid cells through the fatty tissue around and about the node. The nodal architecture is preserved though there is reticulum cell hyperplasia. Again I would point out that the interpretation "compatible with but not diagnostic of malignant lymphoma" is not a real diagnosis.

At autopsy there was a great deal of emaciation. There was some accumulation of fluid in the serosal cavities but this seemed to be in the nature of a transudate. There was lymph node enlargement in the mesenteric and pancreatic nodes as well as in the mediastinal nodes. These nodes measured up to 2 cm., were firm in consistency, but had central liquefaction on occasion. In the histiologic sections of these nodes you see two patterns of tumor growth. First, there is a diffuse infiltration of these rather pleomorphic looking cells which are definitely neoplastic in character and might be described as reticulum in type. (Fig. 1.) Secondly, there is a nodular type of growth and this simulates a metastatic epithelial tumor. (Fig. 2.) Both Hodgkin's sarcoma and reticulum cell sarcoma, if they be distinct entities, can show this nodular type growth as we see it in this case in the liver, lymph node, and spleen and also in the bone marrow. There was not a tremendous amount of grossly detectable tumor present though the spleen was enlarged some two to three times.

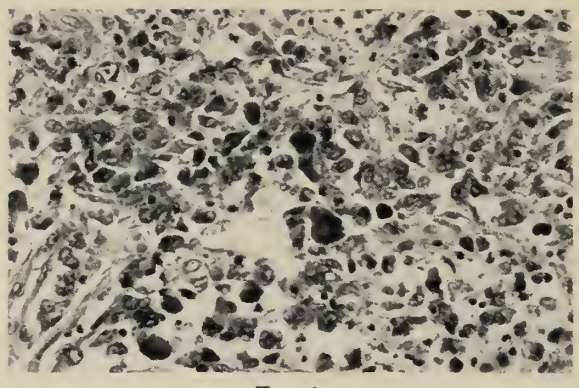


FIG. 1.

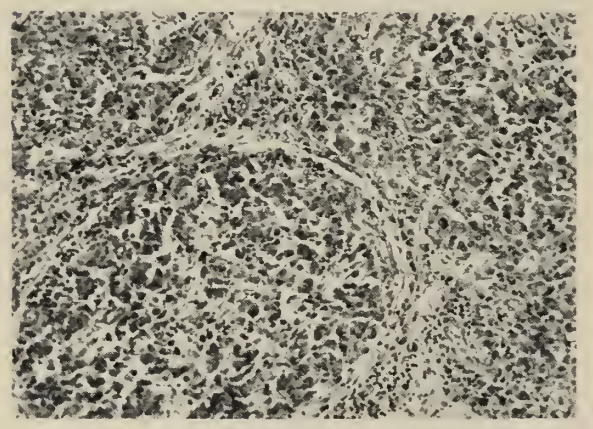


FIG. 2.

In many of the lesions there is associated infiltration of lymphoid cells and neutrophiles. The pulmonary lesions were particularly interesting from this point of view. They occurred as nodular subpleural infiltration with fibrin and actual necrosis in their mid-part. (Fig. 3.) In the periphery of these lesions there was an infiltration of neoplastic cells some of which filled fairly well the criteria of Reed-Sternberg cells. (Fig. 4.) Another rather unusual site of lymphomatous infiltration was in the interstitial tissue of the pancreas and in the retroperitoneal connective tissues.

It is impossible for us to say why such individuals expire. Certainly the amount of tumorous involvement is not of a degree

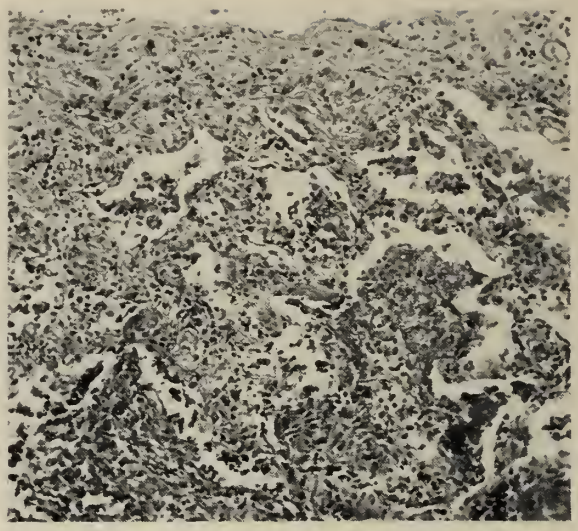


FIG. 3.

to suggest its actual physical presence as leading to death. The tremendous amount of weight loss associated with this type of lymphoma is hard to explain. It seems to

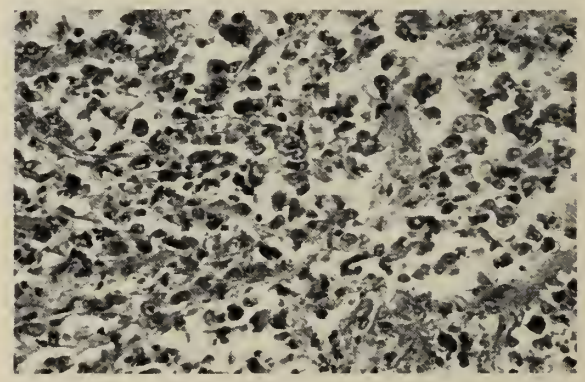


FIG. 4.

me that we encounter a group of patients with Hodgkin's disease which tends to involve middle-aged to elderly individuals with widespread microscopic involvement and lesions simulating an infection to a remarkable extent. In addition, involvement of superficial lymph nodes seems inconspicuous in these cases. The case at hand seems to fall into this group.

President's Page



Dr. Kampmeier

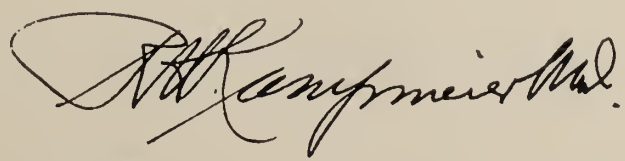
When measured in numbers of persons whose illness has been modified, the psychotropic drugs stand second only to those effective against infections and infectious diseases. Just as antibacterial medicaments have saved or prolonged many lives, so the psychotropic drugs have made, and will in increasing number make it unnecessary to enter patients into mental hospitals. If the statement sometimes made, that on an average about one in every ten persons will have a mental break, is paired with the previous statement some very important deductions can be drawn as to the role of the practitioner in the care of the mentally ill.

It is probable that few doctors realize the implications of these facts unless they have given them some serious thought. The magnitude of what faces medicine and its allies is appreciated mainly by only one group of physicians,—the psychiatrists. The time is rapidly approaching when domiciliary care will be limited in the great majority of instances to those who are mentally defective and those having the mental deterioration of senility or age.

The general hospitals are rapidly extending themselves to provide for the management of acute episodes of mental disease, since psychotropic drugs within hours may make the patient accessible to psychotherapy. The psychiatrists are well aware of the need of enlisting family physicians in this program of care for the mentally ill—there are not enough psychiatrists "to go around."

The real "shocker" to the medical person is that the problem of mental illness is too big for him to handle alone. It is difficult for one who has dealt only with definitive care for organic disease to accept that he alone may not have the last word in management. Fitting the patient into the community's pattern of life may need a social worker, a psychologist, public health nurse or vocational counsellor, and possibly above all, a knowledgeable public and industrial management—educated by volunteers and interested citizens.

The doctor who has his doubts and tongue-in-cheek about the matter might do well to read carefully not only the lines, but also between the lines, which document, in this issue, the first Tennessee Congress on Mental Illness and Health of last November.



President

THE JOURNAL

OF THE
TENNESSEE MEDICAL ASSOCIATION

Published Monthly
Devoted to the Interests of the Medical Profession of Tennessee
Office of Publication, 112 Louise Avenue, Nashville 5, Tenn.

Acceptance for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized July 15, 1932.

Copyright for protection against republication. Journals of the American Medical Association and of other state medical associations may feel free to quote from this Journal whenever they desire merely giving credit to this publication.

Address papers, discussions and scientific matter to R. H. Kampmeier, M.D., Editor, B-4211 Vanderbilt University Hospital, Nashville 12, Tennessee
Address organizational matters to Jack E. Ballentine, Executive Director, 112 Louise Avenue, Nashville 5, Tenn.

R. H. KAMPMEIER, M.D., Editor
Vanderbilt University Hospital, Nashville

EDITORIAL BOARD

ADDISON B. SCOVILLE, JR., M.D.
2104 West End Ave.
Nashville 5, Tennessee

ALBERT WEINSTEIN, M.D.
Medical Arts Building
Nashville 12, Tennessee

COMMITTEE ON SCIENTIFIC WORK AND POST GRADUATE EDUCATION

R. H. KAMPMEIER, M.D., Chairman
W. POWELL HUTCHERSON, M.D., Chattanooga
ROBERT P. MCBURNEY, M.D., Memphis
EUGENE J. SPIOTTA, M.D., Memphis
(Specialty Society Representatives to be named)

MAY, 1964

EDITORIAL

TENNESSEE CAMP FOR DIABETIC CHILDREN

The establishment of summer camps for diabetic children had its start in Detroit about 40 years ago when the late Dr. Wendt first recognized the need for such a facility. Later, in Maine, a nurse from the Deaconess Hospital took a diabetic child into her home for the summer and from this inauspicious start developed the successful camp program now being carried out by the Elliott P. Joslin Camp in Charlton, Mass. and similar camps throughout the country.

The importance of camps for diabetic children is well recognized by all who treat such patients. Hospital and office management of these patients is supplemented by such camps. Treatment of the child during normal physical activity is of inestimable value. The greatest benefit to the patient probably comes from close contact with others of his age group who also are learning about this disease and its management. In addition, close contact with those older and better trained than he, such as physicians, nurses and dieticians, increases his knowledge and understanding of this metabolic disorder.

In 1951, Tennessee began its summer camp for these children which finally resulted in the construction of the present Tennessee Camp for Diabetic Children on Lake Chickamauga. The camp was erected through the generosity of Mr. and Mrs. Gordon Street of Chattanooga, and has received generous support from the Tennessee Diabetes Association and various civic-minded groups and individuals.

T.C.D.C. located just north of Chattanooga in rolling foothills covered with a growth of natural timber and abounding in scenic beauty is ideally situated to provide the finest facilities for the diabetic child. Here, nestled on the shores of Lake Chickamauga are not only superb modern buildings with cabin areas for boys and girls, but also the necessary equipment and structures to provide swimming, canoeing, riflery, riding, arts and crafts, all important in the education and development of each camper. Fifty junior and senior counselors, including a physician, nurse and dietician, provide the necessary supervision and instruction for these young people.

Although T.C.D.C. is supported financially by Tennesseans, only one-third of the 92 boys and girls who attended last year's camp were from this state. Presumably the camp is less known to Tennessee physicians than physicians in our neighboring states. Each physician of Tennessee, who numbers among his patients a diabetic child, should make every effort to enroll the child as a camper in T.C.D.C. The cost of two weeks' camping is from $0.00 to $85.00 depending upon the family's ability to pay. Financial assistance is available to all children needing help.

Tennessee has every reason to be proud of this unique facility. It is the hope of all who support the Tennessee Camp for Diabetic Children that every physician in Tennessee will urge each of his juvenile diabetics to enroll for this most valuable two weeks' camping experience.

A. B. S.

DOCTORS IN THE DRUG BUSINESS

Years ago it was not only common but often essential for a doctor to have his own supply of drugs and to dispense them to his patients. Some of us may recall days when no registered pharmacist was within miles —miles of mud for a plodding horse and buggy, or on horseback on a trail, or snowy miles by sleigh. Those were days when the only packaged drugs were essentially the proprietary remedies, and the doctor mixed his own prescriptions.

A small portion of our population may still need drugs dispensed by the doctor, and for these the AMA Principles of Medical Ethics provides that "drugs, remedies and appliances may be dispensed or supplied by the physician provided it is in the best interests of the patient."

But there occurred another development years ago, at a time and under circumstances which might have been considered to be logical and natural,—the doctor-owned pharmacy. Either the doctor, or a pharmacist employed by him, compounded the prescriptions for his own patients and those of his competitors and confreres in the town. However, with the development of packaged drugs, multiplicity of drugs, their high cost and the sales philosophies of modern competitive business, a drug store owned by a doctor provided a potential hazard to both the owner and his patients.

Last year the AMA House of Delegates considered this item of ethics pointing out that the unethical aspect of a doctor owning or operating a pharmacy is related to possible exploitation of his patients by: (1) overprescribing; (2) steering patients to doctor-owned pharmacies; (3) refusing patients copies of the prescription; (4) prescribing by code known only to certain pharmacies; or (5) maintaining a direct telephone line to certain pharmacies. The Judicial Council of the AMA also decided it to be unethical for a doctor to lease space to a pharmacy on a 'percentage of gross' basis.

In addition the AMA House of Delegates concluded in 1963 that, "It is unethical for a physician to have a financial interest in a drug repackaging company." The Judicial Council defined a repackaging company as one "which markets under its own label or trade names drug products manufactured by others with the objective that physicians having a financial interest in the drug company will prescribe its drugs to the patient."

Four states have enacted laws within the past year curtailing or prohibiting physicians from owning or operating pharmacies. Furthermore, representatives of the Senate Subcommittee on Antitrust and Monopoly have visited the AMA to gather information on this subject.

It seems likely that the Senate Subcommittee may hold hearings on this subject. It is known, also, that information relative to doctor-ownership of pharmacies in Tennessee is in the hands of some of our own legislators. Furthermore, it is thought probable that the whole subject of doctor-owned pharmacies and drug repackaging companies will again be up for consideration by the AMA House of Delegates.

Yes,—most of this appeared on the *Yellow Pages* of last month's issue of the JOURNAL OF THE TENNESSEE MEDICAL ASSOCIATION! But since the "lid may blow off" during the coming year it seemed best to recapitulate this information in the hope of attracting as many readers as possible.

It would be wise and simple to forego the common custom of accepting prescription blanks from a pharmacy with its name printed on them. To pay for one's own prescription blanks is much the safer. Very few of those who have investments in drug stores or repackaging companies will do anything about this item until they are put in an illegal position. But *they* will provide a Roman holiday for the Senate Subcommittee when and if it investigates the medical profession in this regard. The AMA Code of Ethics has had a raised eyebrow on this topic for many a year. Motions to amend the Code of Ethics by providing that "physicians should resign to apothecaries the whole business and profits of dispensing medicines" first appeared in *May of 1869!* They were tabled then, but became a part of the Code some years later.

R. H. K.

PROGRAMS AND NEWS OF MEDICAL SOCIETIES

Bradley County Medical Society Organized 75 Years

The 75th anniversary of the Bradley County Medical Society was observed March 30th with a "Diamond Jubilee" dinner at the Cleveland Golf and Country Club. On April 8, 1888, twelve doctors organized the "Medical Society of Cleveland, Tennessee." By June 1891 the membership roll had increased to twenty. TMA records show a total of 29 members in 1964.

The following preamble to the Constitution adopted at the first meeting is still in effect after 75 years:

"We the undersigned physicians of Cleveland and surrounding country do declare ourselves a Society for mutual improvement in our profession and for enlarging our fund of general information in the pursuit of which we desire to exhibit a due consideration for the opinions and feelings of our Professional Brethren. To maintain a perfect command of temper in all our relations to each other and to seek for truth in all of our exercises and have adopted for government the following constitution and by-laws."

Five local doctors were honored at the dinner which climaxed the annual "Doctor's Day" celebration sponsored by the medical auxiliary. Presented with engraved silver plaques were Drs. Dwight Arnold, William Garrott, W. B. Foster, W. C. Stanbery and S. J. Sullivan.

Roane-Anderson County Medical Society

Dr. John Simmons, assistant professor of urology, University of North Carolina, was guest speaker at the dinner meeting of the society on April 28th at Oak Ridge Hospital. His subject was "Surgical Treatment of Hypertension." A business meeting followed the dinner at 8:30 P.M.

Knoxville Academy of Medicine

"The Doctor and Legal Liability" was the topic discussed by Attorneys Foster D. Arnett and E. Bruce Foster of the Knoxville Bar Association, at the meeting of the Academy on April 21st. The meeting was held in the Academy of Medicine Building.

Nashville Academy of Medicine Davidson County Medical Society

The quarterly meeting of the Academy, combined with hospital staff meetings, was held on May 12th at the Hermitage Hotel. Guest speaker for the scientific program was Dr. Edwin Ide Smith, chairman of surgery, Children's Mercy Hospital, Kansas City, Missouri. His subject was "Surgical Conditions of the Rectum and Colon in Infants and Children."

Chattanooga-Hamilton County Medical Society

A dinner meeting of the Society, sponsored by Chattanooga Surgical Company, was held at Fairyland Club, Lookout Mountain, on May 5th. Guest speaker for the occasion was Dr. Jack Schreiber, Member of AMA Speaker's Bureau and President of the Mahoning County Medical Society, Youngstown, Ohio. His subject was "Liberty Is Like A Woman."

The Woman's Auxiliary of the Chattanooga-Hamilton County Society received three awards citing achievements at the Annual Meeting of the Auxiliary in Memphis in April. The awards included the Potter-Nicely Achievement Award, recognizing outstanding achievements of the year, marking the sixth time the local group has won it, and a certificate of achievement from the AMA-ERF in tribute and gratitude for the outstanding aid it gave in assuring for America's future the finest medical training in the world; and a second-place award for the organization's "Doctors' Day" activity.

NATIONAL NEWS

The Month in Washington
(From the Washington Office, AMA)

The American Medical Association has recommended to Congress that modernization of existing hospital facilities, especially in urban centers, be emphasized in the Hill-Burton hospital construction program.

An AMA spokesman told the House Commerce Committee that a 1956 study indi-

cated that about one-half of the nation's hospitals needed about $1 billion worth of modernization.

The committee was considering a five-year extension of the Hill-Burton program. The AMA supported the legislation but recommended changes in some of its provisions.

The AMA concurred with the provision that would combine the various types of chronic disease hospitals and nursing homes into one category called "long-term care facilities."

The AMA also supported the principle of federal guarantee of mortgages financing the cost of construction or modernization of a private nonprofit hospital or other specified medical facility, or proprietary nursing home. "The use of the guaranteed mortgage mechanism offers an incentive to local nonprofit organizations to construct and improve needed medical facilities," the AMA said.

The AMA opposed a provision that would transfer to the Department of Health, Education and Welfare the Federal Housing Administration program of insured loans for construction of proprietary nursing homes.

The AMA also testified that "diagnostic and treatment centers" should be deleted as facilities eligible to participate in the Hill-Burton program.

"There is little evidence of demand for these facilities since their inclusion in 1954," the AMA said. "Moreover, the definition of the term 'diagnostic or treatment center' is vague and confusing."

The AMA urged that the traditional local determination of need and local administration of the Hill-Burton program be continued.

"The success enjoyed by the program testifies to the effectiveness of this approach," the AMA said. "The Association further urges that area-wide planning for hospitals and related health facilities remain on a voluntary basis. . . . It is our belief that the success of each project would be enhanced if the efforts of the local agency and the local medical society could be joined when planning the location or improvement of facilities."

The Administration asked Congress to authorize a five-year, $260 million plan of federal aid designed to increase the number of nurses in the United States.

The plan called for federal grants and loans for construction of nursing schools and training of nurses.

The American Medical Association approved in principle the construction provision but opposed loans and scholarships for nursing students.

Under the Administration plan, a total of $110 million would be spent over a four-year period on grants to construct new schools of nursing and to replace and expand existing schools. Another major feature of the bill encompassing the plan calls for spending $85 million over five years on loans to nursing students. A "forgiveness feature" would apply to 60% of the loan.

To improve nurse training and service, project grants totaling $58.8 million would be allocated over five years to public and nonprofit agencies.

Other funds would be spent on planning grants to help states develop nursing programs and a limited undergraduate scholarship program.

Boisfeuillet Jones, Special Assistant to the Secretary of HEW, told a House Commerce Subcommittee that it was the hope of the Administration that through passage of the bill the total number of nurses in the country—presently estimated at 550,000—would increase to 680,000 by 1970.

★

The National Cancer Institute has sent Congress an encouraging report on its battle against leukemia. It asked for funds for "an all-out effort toward the goal of a cure."

In testimony made public by a House Appropriations Subcommittee, Institute Director Kenneth M. Endicott said there had been a great increase in the number of children in which it was possible to arrest the disease, at least temporarily. He told the subcommittee that improved treatments had increased the remission rate for children with acute leukemia to about 90% and had "dramatically increased the periods of their remissions and consequently their life expectancy."

Dr. Endicott said the Institute, an arm of the Government's National Institutes of Health, had more than 60 children in its study groups who had survived more than five years after being treated with drugs. "Nine children out of ten who come into the Institute hospital, who are usually desperately ill, go into remission, and to all intents and purposes, regain their health, go back home, go back to school and so on, at least for a time," he said.

Subcommittee members also asked Endicott about possible cancer-causing elements in such food as charcoal broiled steaks and potatoes cooked in ashes.

He said several laboratories had found cancer-causing agents when fats were heated to high temperatures and incompletely burned. Asked if people should stop eating such food, he said "some might draw that conclusion. I am not prepared to go that far yet."

Food and Drug Commissioner George P. Larrick hailed a federal court decision against promotional claims for vitamins and other food supplements as a landmark in the history of efforts against nutritional misinformation.

The Federal District Court ruled false many widely used promotional claims for vitamins and other food supplements after a lengthy hearing on the seizure of a quantity of vitamin and mineral capsules distributed by the Vitasafe Corporation, Division of Consolidated Sun Ray, Inc., at Middlesex, N. J., in October 1960. The seized products were labeled in part "Vitasafe Formula M," "Vitasafe Formula W," "Vitasafe CF," and "Vitasafe Queen Formula with Royal Jelly Supplement for Women."

Judge Arthur J. Lane, in his opinion, noted that labeling of the seized products represented that Vitasafe capsules were adequate and effective for the treatment or prevention of some 38 conditions, including "depression, tension, weakness, nervous disorders, lethargy, lack of energy, lassitude, impotence, aches and pains, aging, impaired digestion, loss of appetite, lesions and scaliness, night blindness, photophobia, fatigue and headaches."

"This representation is false and misleading," Lane said. "The evidence produced at trial conclusively proves that the above designated symptoms or conditions are caused by and associated with a great number of serious pathological diseases. Further, although some of these symptoms may be associated with vitamin and mineral deficiencies, the likelihood of their being caused by or associated with vitamin or mineral deficiencies in the U.S. today is very small."

MEDICAL NEWS IN TENNESSEE

Tennessee's Medical Self Help Training Program

Tennessee's Medical Self-Help Training Program leads the nation in number of graduates at the end of the program's first year. The State Department of Public Health has announced that 26,204 Tennesseans have completed the sixteen hour course. The U. S. Public Health Service developed the training program to help prepare individuals for survival in time of a major disaster when physicians and other health personnel are not readily available. The national goal is at least one trained member in each family. The Medical Self Help Training Course, which is approved by the American Medical Association, has been included in the curriculum of high schools throughout the state. Community and civic groups, private and industrial enterprises also offer the course to members and employees. The entire course, including instructor kits, are furnished by the U. S. Public Health Service through local and state health departments and local civil defense offices. The activity has been included in the program and actively supported by TMA's Committee on Disaster Medical Care.

Third Annual Medical Symposium

Two hundred East Tennessee and Southwest Virginia physicians and their wives attended the Third Annual Medical Symposium sponsored by the medical staff of Bristol Memorial Hospital at the Bristol Country Club on April 9th. The discussion topic was "Diseases of the Upper Gastrointestinal Tract," with emphasis on ulcers,

and the instructional portion of the symposium was conducted by four physicians and surgeons of professional prominence: Dr. Julian M. Ruffin, professor of medicine, Duke University, Durham; Dr. McLemore Birdsong, chairman of the pediatrics department, University of Virginia Hospital, Charlottesville; Dr. Samuel Marshall, senior surgeon, New England Deaconess and New England Baptist Hospitals, Boston; and Dr. Sam E. Stephenson, Jr., associate professor of surgery, Vanderbilt University School of Medicine, Nashville.

Health Unit Chartered

An independent organization to serve as a health and hospital planning council for the Nashville area has been chartered by the State of Tennessee. The organization, known as the Nashville Metropolitan Region Health and Hospital Planning Council, will be a separate autonomous advisory group. Its purpose is to survey existing hospital and health care facilities, and make recommendations for expansion of present facilities or construction of new ones on a planned and rational basis. The Council will be advisory in character and will serve as a referral source for new groups or institutions planning expansion or new construction of health care facilities. It will also serve as a point of reference for groups considering donations to hospitals or health care projects.

Two Cardiac Symposiums for Nurses in State

The Ninth Annual Cardiac Symposium for Nurses, under the sponsorship of the Chattanooga Area Heart Association and the heart control program of the Tennessee Department of Public Health, was held at First Christian Church, Chattanooga on April 7-8. Featured speakers included Dr. Nicholas P. Dallas, Scottsdale, Arizona, psychiatrist, and author of three syndicated comic strips; and Miss Lucie C. M. Schultz, assistant professor at Texas Woman's University College of Nursing, Houston, Texas.

Three persons with up-to-date answers on the rehabilitation of stroke patients addressed the Sixth Annual Cardiac Nursing Conference on April 14th at St. Mary's Hospital in Knoxville. They were Dr. Fred F. Brown, Knoxville neurosurgeon; Dr. Richard E. May, associate director, cardiovascular disease control service of the Georgia Department of Public Health; and Gene L. Sellars, nursing consultant of Middle Tennessee Heart Association, Nashville. Some 300 registered and licensed practical nurses from East Tennessee attended the symposium sponsored by the East Tennessee Heart Association; Tennessee Nurses Association, District II; and East Tennessee League of Nursing.

University of Tennessee College of Medicine

The Department of Pathology has been awarded $109,494 by the National Cancer Institute of the U. S. Public Health Service for an additional four-year study on the development and evaluation of tests for the early detection of cancer. Dr. Douglas H. Sprunt, chairman of the department and others of the staff have evaluated many such tests since 1948, and will evaluate new ones when described. A prerequisite of these tests is that they will detect cancer in apparently healthy persons with very few, if any, failures. A number of such tests have been examined in the last 14 years, but so far only one has been found useful. The search will continue for a simple laboratory test to detect the presence of cancer before it becomes clinically apparent.

St. Jude Hospital

Speakers for recent research seminars at St. Jude Hospital were Dr. William L. Nyhan, professor and chairman of the department of pediatrics at the University of Miami School of Medicine, and Dr. E. Edward Evans, associate professor of medicine at the University of Alabama Medical Center in Birmingham. Dr. Nyhan discussed the metabolism of uric acid and its relation to functions of the central nervous system, and Dr. Evans discussed immune responses in cold blooded animals.

★

A $32,650 research grant for electron microscope studies of cancer viruses has been awarded the Hospital. The grant was made by the National Cancer Institute of the U. S.

Public Health Service for the purchase of an electron microscope to study viruses that produce leukemia and other forms of cancer. Principal investigator is Dr. Robert W. Darlington, assistant professor of virology at St. Jude and microbiology at U.T.

Meharry Medical College

Eighteen students at Meharry Medical College were honored with awards for "excellence in student research" recently at the Ninth Annual Student Research Day Lecture. Dr. Herbert B. Gerstner, Medical Course Coordinator, Oak Ridge Institute of Nuclear Studies, presented the lecture entitled "Comparative Analysis of the Acute Radiation Syndrome in Man and Animals." The honored students presented abstracts for 15 minutes each on their several research projects. Meharry's student research day is supported by a grant from Merck, Sharp and Dohme laboratories.

Central State Hospital

An Open House was held on Sunday afternoon, May 3. Informative talks and conducted tours by members of the staff were the features. More than five hundred Tennesseans visited the Institution in the two hour period.

PERSONAL NEWS

Three Tennessee physicians have been appointed to committees and councils of AMA. They are: **Dr. Marcus J. Stewart,** Memphis, to Committee on Rehabilitation; **Dr. Allan D. Bass,** Nashville, to Council on Drugs; and **Dr. Chas. C. Smeltzer,** Knoxville, has been reappointed as a member of the Committee on Blood.

Dr. Jean M. Hawkes, Memphis, specialist in internal medicine, has been elected president of the Shelby County Tuberculosis and Health Association.

Madison County's Quarterly Court has elected **Dr. James L. Thomas,** Jackson, as county physician to succeed **Dr. Frank A. Moore.**

Dr. Henry G. Rudner, Sr., Memphis, has been named emeritus clinical professor of medicine at the University of Tennessee College of Medicine.

Dr. James Lynn Craig, former Knoxvillian who has been doing graduate work in industrial medicine at the University of Pittsburg, Pa., for the past two years, will return to his position with Tennessee Valley Authority on June 1st and will be stationed in Chattanooga.

Dr. John T. Evans, Chattanooga, has been accepted as a diplomate in the American Board of Otolaryngology.

Dr. John A. Jarrell, Jr., Nashville, spoke on "Value of Inhalation Therapy in Commonplace Medical Problems" at the March meeting of District 19, Tennessee Nurses Association.

Dr. John J. Lentz, 78, Nashville, will close one of the longest careers on record in local government circles in retiring after 50 years and 11 months as Davidson County and Metropolitan Director of Public Health.

Dr. D. G. Seymour, Knoxville, discussed Fort Sanders and East Tennessee in the Civil War at a recent meeting of the Alcoa Rotary Club.

Dr. Francis Murphy, chief of neurosurgery for Memphis Hospitals, has been elected chairman of the American Board of Neurological Surgeons.

Dr. James L. Allen, Calhoun, spoke on "Rehabilitation of the Cardiovascular Accident Patient" at a recent meeting of Area 18, Tennessee Licensed Practical Nurses' Association.

Dr. Lewis F. Preston, Oak Ridge, has been elected a member of the Board of Directors of the First National Bank in Clinton.

Dr. Rudolph M. Landry, staff surgeon at Newell Hospital Clinic, Chattanooga, became president of the Association of Surgeons of the Southern Railway System at the group's 63rd annual meeting in Durham, North Carolina. **Dr. J. Marsh Frere, Sr.,** head of the Newell Department of Roentgenology, was named recording secretary.

Dr. Ralph R. Braund, Memphis, was principal speaker at the annual dinner of the Dyer County Cancer Unit.

Dr. William R. Massey has joined the staff of Smith-Chitwood Hospital in Lafayette.

Three Chattanooga physicians are among 649 new Fellows of the American College of Obstetricians and Gynecologists: **Drs. Robert W. Boatwright, F. Jones Smiley** and **Herschel Barlow Harris.**

Dr. Victor H. Klein, Jr., Knoxville, was principal speaker at the Cancer "Kick-Off" meeting at Newport on April 6th.

Dr. McCarthy DeMere, Memphis, was recently installed as president of the Southeastern Society of Plastic and Reconstruction Surgeons.

Dr. B. L. Couch, formerly with the State Health Department, has opened his office for the practice of medicine in Humboldt.

Dr. Ralph M. Kniseley, Oak Ridge, presented a paper at the International Atomic Energy Symposium on Medical Radioisotope Scanning in Athens, Greece, April 20-24.

Dr. Chas. C. Trabue, IV, Nashville, was recent guest speaker at the Rotary Club.

Dr. Martin R. Beyer retired April 1st as director of the Weakley County Health Department after serving 21 years.

Dr. Kenneth G. Ross is the recipient of the first "Man of the Year" award ever presented by the Paris Elks Lodge.

Dr. William F. Schmidt, Bristol, participated in

a panel discussion on TB Eradication at the annual meeting of the Virginia Tuberculosis Association in Roanoke, March 24-25.

Dr. Raymon S. Vinas has joined the staff of Cumberland Clinic in Crossville as a specialist in obstetrics and gynecology.

Dr. Samuel L. Raines is the new chief of medical staff of Methodist Hospital in Memphis succeeding **Dr. Nicholas Gotten.**

Dr. C. Harold Steffee, Memphis, has been re-elected president of the Community Blood Plan.

Elected as Fellows to the American College of Physicians at its recent meeting in Atlantic City were **Drs. Howard A. Boone, Harry L. Davis** of Memphis, **Dr. Merrill F. Nelson** of Chattanooga, and **Dr. Alvin Keller** of Nashville. **Drs. Harrison J. Shull** and **R. H. Kampmeier,** Nashville, were re-elected for a second term as Governor for Tennessee and as Regent of the College, respectively.

ANNOUNCEMENTS

Calendar of Meetings, 1964

State

May 21 —Middle Tennessee Medical Association, Claramont Inn, Sewanee

June 4-6 —Tennessee Heart Association, Hermitage Hotel, Nashville

June 9-10 —Upper Cumberland Medical Society, Cloyd Hotel, Red Boiling Springs

Sept. 28-29 —Tennessee Valley Medical Assembly, Tivoli Theatre, Chattanooga

Nov. 4-6 —Annual Assembly of Tennessee Academy of General Practice, Gatlinburg Auditorium

Regional

Aug. 20-22 —West Virginia State Medical Association, Greenbrier Hotel, White Sulphur Springs

Sept. 16-19 —Colorado Medical Society, Broadmoor Hotel, Colorado Springs

Sept. 29-Oct. 1—Kentucky State Medical Association, Kentucky Hotel, Louisville

Nov. 16-19 —Southern Medical Association 58th Annual Meeting, Memphis

National

May 25-27 —American Gynecological Society, Homestead Hotel, Hot Springs, Va.

May 28-30 —American Ophthalmological Society, Homestead Hotel, Hot Springs, Va.

June 13-19 —American Orthopaedic Association, Vancouver

June 18-19 —American Pediatric Society, Olympic Western Hotel, Seattle

June 18-22 —American College of Chest Physicians, Jack Tar Hotel, San Francisco

June 21-25 —American Medical Association, Fairmont and Mark Hopkins Hotels and Civic Auditorium, San Francisco

July 24 —American Diabetes Association, Royal York Hotel, Toronto

Aug. 24-27 —American Hospital Association, Palmer House, Chicago

Sept. 28 —AMA Council on Occupational Health, Rice Hotel, Houston

Sept. 9-12 —International College of Surgeons (North American Federation) Chicago

Chest Physicians Plan Mexico Congress

Physicians from more than fifty countries will present papers and discuss the recent advances in cardiovascular and pulmonary diseases at the VIII International Congress on Diseases of the Chest to be held in Mexico City, October 11-15. For further information and registration blanks write to the American College of Chest Physicians, 112 East Chestnut Street, Chicago, Illinois 60611.

Course in Postgraduate Gastroenterology

The Annual Course in Postgraduate Gastroenterology of the American College of Gastroenterology will be given at the Roosevelt in New York City, October 22-24. The subject matter will include the diagnosis and treatment of gastrointestinal diseases and comprehensive discussions of diseases of the esophagus, stomach, pancreas, spleen, liver and gallbladder, colon and rectum. A clinical session also will be held at the Mt. Sinai Hospital. For further information and enrollment, write to the American College of Gastroenterology, 33 West 60th Street, New York, N. Y. 10023.

East Tennessee Pediatric Association

The 1964 meeting of the East Tennessee Pediatric Association will be held at the Gatlinburg Inn, Gatlinburg, June 5-6. Speakers will be Dr. Walter T. Hughes, assistant professor of pediatrics, University of Louisville; Dr. Douglas Powers, associate professor of child psychiatry, Medical College of Virginia; and Dr. Claude A. Frazier, pediatric allergist, Asheville, North Carolina. The meeting is acceptable for 7 hours of Category II credit by the AAGP. For additional information, contact Robert W. Meadows, M.D., Laurel Avenue at 22nd Street, Knoxville, Tennessee.

Postgraduate Courses— American College of Physicians

"Recent Advances in Clinical Nutrition and Me-

tabolism"—June 1-5, Lemuel Shattuck Hospital, Boston 30, Massachusetts

"Recent Progress in Endocrinology"—June 8-12, Auditorium, The Student Union Building, University of Washington

"Psychiatry for the Internist"—June 15-19, Psychiatric Institute, University of Maryland Hospital, Greene and Redwood Streets, Baltimore, Maryland

Please send all registrations, requests for information and application blanks to Dr. Edward C. Rosenow, Jr., Executive Director, American College of Physicians, 4200 Pine Street, Philadelphia, Pa. 19104.

Patient Care To Be Discussed by Physicians-Nurses in San Francisco

A discussion on "Joint Planning of Patient Care by Physicians and Nurses in the Hospital and Home" will occur in San Francisco on June 24 during the AMA annual convention, sponsored by AMA's Committee on Nursing. It will be held in Room D of the Civic Auditorium.

Second Hawaii Seminar

The Hawaii Medical Association will sponsor the second seminar directly following the 1964 AMA San Francisco Meeting. An excellent program with prominent speakers from the mainland and from the Hawaii Association has been arranged. The scientific sessions will be interspersed with an attractive program of entertainment and hospitality events. Complete details can be obtained from the Hawaii Medical Seminar, Suite 300, 1612 K Street, Washington, D. C. 20006.

Postgraduate Day Vanderbilt University and Central State Hospital

This Postgraduate Course to be given on Thursday, May 28 is designed to aid the physician in the aftercare of patients discharged from a mental hospital. The program will include a discussion of the use of drugs in the management of the emotional disturbances encountered in general office practice.

Guest speakers will be: Dr. Thomas Bidder, Associate Professor of Pharmacology and Associate Professor of Psychiatry at Western Reserve School of Medicine, Cleveland, Ohio; and Dr. Charles Vernon, Director of Community Services, State Department of Mental Health, Raleigh, North Carolina, and Clinical Associate Professor, Department of Psychiatry, University of North Carolina School of Medicine. He is Chairman of the Clinical Psychology Committee of the Academy of General Practice in North Carolina.

Registration will be held in the lobby of the Intensive Treatment Building at Central State Hospital at 8 a.m. Tuition and lunch for registrants will be by courtesy of Central State Hospital.

OFFICERS OF THE TENNESSEE MEDICAL ASSOCIATION, 1964-65

President—R. H. Kampmeier, M.D., B-4211, Vanderbilt Hospital, Nashville
President-Elect—John H. Burkhart, M.D., 3000 North Broadway, Knoxville
Vice-President—George K. Henshall, M.D., Medical Arts Building, Chattanooga
Vice-President—Robert M. Finks, M.D., 2122 West End Avenue, Nashville
Vice-President—Lamb B. Myhr, M.D., Jackson Clinic, Jackson
Secretary—Charles A. Trahern, M.D., 1724 Memorial Drive, Clarksville
Excutive Director—Mr. J. E. Ballentine, 112 Louise Avenue, Nashville 37203

BOARD OF TRUSTEES

*John H. Burkhart, M.D., Chairman, (1967) 3000 No. Broadway, Knoxville
*John C. Burch, M.D., Vice Chairman and Treas., (1967) 2112 West End Ave., Nashville
*J. Malcolm Aste, M.D., (1965) 188 South Bellevue, Memphis
Bland W. Cannon, M.D., (1965) 402-B, 20 South Dudley Street, Memphis
*E. L. Caudill, Jr., M.D., (1966) 114 East H Street, Elizabethton
C. D. Hawkes, M.D., (1966) 220 South Claybrook Street, Memphis
G. Baker Hubbard, M.D., (1966) Jackson Clinic, Jackson
Joseph W. Johnson, Jr., M.D., (1965) Interstate Building, Chattanooga
*R. H. Kampmeier, M.D., (1966) Vanderbilt Hospital, Nashville
K. M. Kressenberg, M.D., (1966) 215 Cedar Lane, Pulaski
Chares A. Trahern, M.D., (1965)) 1724 Memorial Drive, Clarksville
(*Executive Committee of the Board of Trustees)

SPEAKER OF THE HOUSE

J. Malcolm Aste, M.D., 188 South Bellevue, Memphis
Vice-Speaker—Tom E. Nesbitt, M.D., 1921 Hayes Street, Nashville

COUNCILORS

First District—J. J. Range, M.D., Memorial Hospital, Johnson City (1966)
Second District—B. M. Overholt, M.D., 717 Cumberland Ave., S.W., Knoxville (1965)
Third District—M. F. Langston, M.D., 103 Palisades, Signal Mountain (1966)
Fourth District—Kenneth L. Haile, M.D., 137 W. Second Street, Cookeville (1965)
Fifth District—John Derryberry, M.D., 844 Union St., Shelbyville (1966)
Sixth District—Harry T. Moore, Jr., M.D., 326 Mid-State Medical Center, Nashville (1965)
Seventh District—Carl C. Gardner, Jr., M.D., 151 Hatcher Lane, Columbia (1966)
Eighth District—O. M. McCallum, M.D., Henderson (1965)
Ninth District—Byron O. Garner, M.D., Hillcrest Dr., Union City (1966)
Tenth District—Francis H. Cole, M.D., Chairman, 188 South Bellevue Boulevard, Memphis (1965)

DELEGATES TO THE AMA

Alvin J. Ingram, M.D., 869 Madison Avenue, Memphis (1965)
Chas. C. Smeltzer, M.D., 521 W. Cumberland Avenue, Knoxville (1966)
Daugh W. Smith, M.D., 1926 Hayes Street, Nashville (1965)
Alternates:
Julian K. Welch, Jr., M.D., Brownsville (1965)
Wm. J. Sheridan, M.D., Medical Arts Building, Chattanooga (1966)
W. O. Vaughan, M.D., 2103 Hayes Street, Nashville (1965)

PRESIDENTS AND SECRETARIES OF COUNTY MEDICAL SOCIETIES, 1964-65

COUNTY	PRESIDENTS	SECRETARIES
Bedford County	Henry Feldhaus, Jr., M.D., 484 Union St., Shelbyville	A. T. Richards, M.D., 208 Madison, Shelbyville
Benton-Humphreys County	Arthur W. Walker, M.D., Waverly	Hiram C. Capps, M.D., Waverly
Blount County	H. T. Vandergriff, M.D., Med. Arts Bldg., Maryville	O. L. Simpson, M.D., Center Bldg., Maryville
Bradley County	Jas. C. Lowe, M.D., 755 Broad St., N. W., Cleveland	James L. Allen, M.D., 420 Central Ave., N. W., Cleveland
Campbell County	James D. Crutchfield, M.D., 100 E. Ave., Lafollette	Roscoe C. Pryse, M.D., Lafollette
Chattanooga-Hamilton County	Edward T. Newell, Jr., M.D., 707 Walnut St., Chattanooga	C. Robert Clark, M.D., 210 Med. Arts Building, Chattanooga Mrs. Flo Richardson, 109 Med. Arts Bldg., Chattanooga—Executive Secy.
Cocke County	Glen C. Shults, M.D., 501 E. Main St., Newport	R. B. McMahan, M.D., 501 E. Main St., Newport
Coffee County	Ralph Brickell, M.D., 601 N. Atlantic St., Tullahoma	Earl Roles, M.D., Tullahoma
Consolidated Medical Assembly of West Tennessee	Lee Rush, M.D., Somerville	Harold Yarbro, M.D., 700 W. Forest St., Jackson
Cumberland County	R. G. Cravens, M.D., 311 S. Main St., Crossville	Jas. T. Callis, M.D., Crossville
Nashville Academy of Medicine Davidson County	Addison Scoville, M.D., 2104 West End Ave., Nashville	Carl Gessler, M.D., 2760 Lebanon Rd., Nashville, 37214 Mr. Jack Drury, 112 Louise Avenue, Nashville—Executive Secretary
Dickson County	W. A. Bell, M.D., 222 Church St., Dickson	Mary Baxter Cook, M.D., Charlotte
Fentress County	Guy C. Pinckley, M.D., Jamestown	B. F. Allred, M.D., Jamestown
Franklin County	E. W. Kirby-Smith, M.D., Sewanee	George L. Smith, M.D., Winchester
Giles County	K. M. Kressenberg, M.D., 215 Cedar Lane, Pulaski	W. H. Murrey, M.D., 215 Cedar Lane, Pulaski
Greene County	J. R. McKinney, M.D., Takoma Hos., Greeneville	John Lay, M.D., 222 N. Main St., Greeneville
Hamblen County	Luke Nabers, M.D., Morristown	E. Richard Baker, M.D., White Pine
Hawkins County	C. C. Johnson, M.D., 50 N. Church St., Rogersville	W. A. Phillips, M.D., Citizens Union Bank Bldg., Rogersville
Henry County	Richard G. Fish, M.D., Commercial Bank, Bldg., Paris	J. D. Mobley, M.D., E. Wood Clinic, Paris
Hickman-Perry County	Sam O. Jones, M.D., Centerville	Parker D. Elrod, M.D., Centerville
Jackson County	E. M. Dudney, M.D., Gainesboro	J. S. Johnson, M.D., Gainesboro
Knoxville Academy of Medicine	John H. Burkhart, M.D., 3000 Broadway, N. E., Knoxville	Ray J. Leffler, M.D., East Tenn. Baptist Hospital, Knoxville
Lawrence County	W. O. Crowder, Jr., M.D., 233 E. Gaines St., Lawrenceburg	James C. Hudgins, M.D., 200 S. Military, Lawrenceburg
Lincoln County	C. Doyne Toone, M.D., South Elk Avenue, Fayetteville	Anne U. Bolner, M.D., Lincoln County Health Dept., Fayetteville
Macon County	Jack C. Clark, M.D., Lafayette	C. C. Chitwood, Jr., M.D., Lafayette
Marshall County	W. S. Poarch, M.D., Lewisburg	H. C. Harris, M.D., Church St., Lewisburg
Maury County	Leon Ward, M.D., 400 W. 7th St., Columbia	Lawrence Nickell, M.D., Maury County Hospital, Columbia
McMinn County	R. Danny Hays, M.D., 7 Grove, N. W., Athens	Robert G. Hewgley, M.D., Med. Arts Bldg., Box 352, Athens
Memphis-Shelby County	William T. Satterfield, Sr., M.D., 1188 Minna, Memphis, 38104	J. Warren Kyle, M.D., 1079 Madison Ave., Memphis, 38104 Mr. Les Adams, 774 Adams Avenue, Memphis—Executive Secretary
Monroe County	Joe K. Wallace, M.D., Sweetwater	Joe Henshaw, M.D., 404 N. High St., Sweetwater
Montgomery County	Howard R. Kennedy, M.D., 419 Franklin St., Clarksville	Frank J. Malone, Jr., M.D., 408 Franklin St., Clarksville
Northwest Tennessee Academy of Medicine	J. H. Ragsdale, M.D., Ripley	Art Murphy, M.D., Trimble
Overton County	W. G. Quarles, M.D., Livingston	Jack M. Roe, M.D., Livingston
Putnam County	Claude M. Williams, M.D., General Hospital, Cookeville	Thurman Shipley, M.D., 135 W. 2nd St., Cookeville
Roane-Anderson County	Albert J. Ahler, M.D., 202 Carter St., Harriman	Robert DePersio, M.D., Med. Arts Bldg., Oak Ridge
Robertson County	Warren G. Hayes, M.D., Bell Bldg., Springfield	Sue C. Atwood, M.D., 500 Main, Springfield
Rutherford County	Lois Kennedy, M.D., 104 S. Spring St., Murfreesboro	Radford Smith, M.D., 420 N. University St., Murfreesboro
Scott County	Maxwell Huff, M.D., Oneida	Roy L. McDonald, M.D., Oneida
Sevier County	Charles L. Roach, M.D., Sevierville	Charles E. Waldrup, M.D., Gatlinburg
Smith County	Thayer S. Wilson, M.D., Carthage	David G. Petty, M.D., Carthage
Sullivan-Johnson County	F. G. McConnell, M.D., 142 Cherokee St., Kingsport	Robert E. Keith, M.D., Med. Dept., Tenn. Eastman Co., Kingsport
Sumner County	W. Gordon Doss, M.D., Hendersonville	Kermit E. Jones, M.D., Westmoreland
Tipton County	Travis L. Bolton, M.D., 728 E. Sherrod, Covington	Warren A. Alexander, M.D., W. Pleasant Avenue, Covington
Warren County	J. E. Puckett, M.D., 203 West Main St., McMinnville	J. C. Gaw, M.D., 315 N. Spring St., McMinnville
Washington-Carter-Unicoi County	Dillard M. Sholes, Jr., M.D., 203 N. Sycamore St., Elizabethton	Gilbert A. Rannick, M.D., 107 W. Fairview Ave., Johnson City
Weakley County	Edward Welles, Jr., M.D., Dresden	M. K. Bottorff, M.D., Martin
White County	Donald H. Bradley, M.D., Sparta	Charles A. Mitchell, M.D., Sparta
Williamson County	Joel Lee, M.D., Franklin	H. P. Hoover, M.D., Franklin
Wilson County	Joe Frank Bryant, M.D., McFarland Hospital—Lebanon	T. R. Puryear, M.D., 239 E. Main, Lebanon

TENNESSEE MEDICAL ASSOCIATION 1964-1965 STANDING COMMITTEES

Committee on Scientific Work and Postgraduate Education—R. H. Kampmeier, Chairman, Nashville; Addison B. Scoville, Nashville.
Seven Specialty Society Secretaries to be named by chairman.

Committee on Hospitals—C. D. Hawkes, Chairman, Memphis (1965); Robert M. Miles, Memphis (1965); James A. Burdette, Knoxville (1966); Harry T. Moore, Jr., Nashville (1965); Chester K. Jones, Jackson (1967); John W. Adams, Jr., Chattanooga (1967); Merlin L. Trumbull, Memphis (1967); George L. Smith, Winchester (1965); Granville Hudson, Nashville (1966); Brian T. Shorney, Nashville (1966).

Legislative and Public Policy Committee—Tom E. Nesbitt, Chairman, Nashville (1967); H. L. Monroe, Erwin (1965); Charles C. Smeltzer, Knoxville (1966); George K. Henshall, Chattanooga (1967); Sam H. Hay, Murfreesboro (1965); K. M. Kressenberg, Pulaski (1966); John G. Riddler, Jackson (1965); Byron O. Garner, Union City (1966); A. Roy Tyrer, Memphis (1967); R. H. Kampmeier, Ex-Officio, Nashville.

Liaison Committee to the Public Health Department—Wm. A. Hensley, Chairman, Cookeville (1966); C. D. Hawkes, Memphis (1965); William I. Proffitt, Cleveland (1967); Lamb B. Myhr, Jackson (1967); Thomas S. Weaver, Nashville (1969).

Committee on Insurance—Wm. T. Satterfield, Chairman, Memphis (1965); Augustus McCravey, Chattanooga (1967); Garth Fort, Nashville (1966); Robert W. Newman, Knoxville (1967); B. F. Byrd, Sr., Nashville, Consultant.

Committee on Cancer—B. F. Byrd, Jr., Chairman, Nashville (1965); Edwin W. Cocke, Jr., Memphis (1965); Ralph H. Monger, Knoxville (1967); C. B. Tucker, Nashville (1967); S. S. Marchbanks, Chattanooga (1965); G. Sydney McClellan, Nashville (1965); John M. Higgason, Chattanooga (1965); Homer P. Williams, Bristol (1965); Cyrus C. Erickson, Memphis (1965).

Committee on Memoirs—Henry L. Douglass, Chairman, Nashville (1965); A. M. Patterson, Chattanooga (1966); S. Fred Strain, Sr., Memphis (1965).

Committee on Health Insurance—B. K. Hibbett, III, Chairman, Nashville; Joseph W. Johnson, Jr., Chattanooga; Robert N. Sadler, Nashville; E. L. Caudill, Jr., Elizabethton; James J. Callaway, Nashville; Wm. A. Garrott, Cleveland; Greer Ricketson, Nashville; Harry T. Moore, Jr., Nashville; William G. Crook, Jackson; J. Cash King, Memphis; Thomas F. Parrish, Nashville; W. T. Satterfield, Memphis; Howard A. Boone, Memphis; Robert N. Buchanan, Jr., Nashville; Frank C. Womack, Jr., Nashville; H. K. Turley, Memphis; A. Roy Tyrer, Memphis; Gilbert A. Rannick, Johnson City; John G. Riddler, Jackson; Charles R. Zirkle, Knoxville; Mr. Clyde York, Columbia; Mr. Charles L. Cornelius, Jr., Nashville; R. H. Kampmeier, Ex-officio, Nashville.

Executive Sub-Committee—B. K. Hibbett, III, Chairman, Nashville; Robert N. Sadler, Nashville; James J. Callaway, Nashville; Thomas F. Parrish, Nashville; Mr. Charles L. Cornelius, Jr., Nashville; R. H. Kampmeier, Ex-officio, Nashville.

Advisory Committee to the State Department of Public Welfare—K. M. Kressenberg, Chairman, Pulaski (1965); James N. Thomasson, Nashville (1969); Carl A. Hartung, Chattanooga (1967); Joseph W. Johnson, Jr., Chattanooga (1966); Lamb B. Myhr, Jackson (1966).

Communications and Public Service Committee—R. A. Calandruccio, Chairman, Memphis (1967); James M. Hudgins, Nashville (1967); Malcolm Campbell, Johnson City (1965); Wm. A. Garrott, Cleveland (1966); Dexter L. Woods, Jr., Waynesboro (1967); Blair D. Erb, Jackson (1965); Roy L. McDonald, Oneida (1967); Charles L. Clarke, Memphis (1966); Morse Kochtitzky, Nashville (1966); Carson Taylor, Lawrenceburg (1966); R. H. Kampmeier, Ex-officio.

Members State-at-Large—Walter Benedict, Knoxville (1965); J. Kelley Avery, Union City (1966); James R. Royal, Chattanooga (1967); Robert N. Buchanan, Jr., Nashville (1967); Geo. D. Dodson, Jackson (1966); Herman J. Kaplan, Nashville (1966).

Executive Sub-Committee—R. A. Calandruccio, Chairman, Memphis (1967); James M. Hudgins, Nashville (1967); R. N. Buchanan, Jr., Nashville (1967); Morse Kochtitzky, Nashville (1966); Herman J. Kaplan, Nashville (1966); R. H. Kampmeier, Ex-officio.

Grievance Committee—W. O. Vaughan, Chairman, Nashville (1965); William J. Sheridan, Chattanooga (1966); Bland W. Cannon, Memphis (1967).

Rural Health Committee—Julian C. Lentz, Jr., Chairman, Maryville (1965); Charles A. Trahern, Clarksville (1966); Robert H. Elder, Cedar Hill (1966); John B. Dorian, Memphis (1966); Eugene M. Ryan, South Pittsburg (1966); Mr. Vernon Darter, Knoxville (University of Tennessee); Mr. Kenneth Cherry, Columbia (Tenn. Farm Bureau).

Committee on Tennessee Medical Foundation—Harrison J. Shull, Chairman, Nashville (1966); Thomas G. Dorrity, Memphis (1966); B. M. Overholt, Knoxville (1966); Julian K. Welch, Jr., Brownsville (1967); Daugh W. Smith, Nashville (1967); Ralph H. Monger, Knoxville (1967); Robert N. Buchanan, Jr., Nashville (1965); J. Paul Baird, Dyersburg (1965); John E. Kesterson, Knoxville (1965).

SPECIAL COMMITTEES

Committee on Disaster Medical Care—George R. Livermore, Jr., Chairman, Memphis; Harmon L. Monroe, Erwin; Fred D. Ownby, Nashville; James C. Prose, Knoxville; Charles W. Reavis, Chattanooga; Moore J. Smith, Chattanooga; Henry Packer, Memphis; Wm. F. Gallivan, Knoxville; John R. Olson, Nashville; Billy N. Golden, Kingsport; Lamb B. Myhr, Jackson.

Committee on Occupational Health—H. L. Monroe, Chairman, Erwin; George E. Duncan, Nashville; Edward G. Johnson, Chattanooga; Louis G. Britt, Memphis; Dudley G. Lockwood, Jr., Memphis; Alfred N. Costner, Johnson City; E. L. Caudill, Jr., Elizabethton.

Liaison Committee to the United Mine Workers of America—John H. Saffold, Chairman, Knoxville; Cecil E. Newell, Chattanooga; B. M. Overholt, Knoxville.

Advisory Committee to the Woman's Auxiliary—Roland H. Myers, Chairman, Memphis; Robert L. Akin, Knoxville; Joe M. Strayhorn, Nashville.

Committee on Blood Banks and Medical Laboratories—Merlin L. Trumbull, Chairman, Memphis; L. W. Diggs, Memphis; John W. Adams, Jr., Chattanooga; John L. Shapiro, Nashville; R. J. Leffler, Knoxville; Thomas P. Potter, Johnson City; James M. Phythyon, Nashville.

Committee on Mental Health—Frank H. Luton, Chairman, Nashville; Robert M. Foote, Co-Chairman, Nashville; Joseph W. Johnson, Jr., Chattanooga; Hollis C. Miles, Chattanooga; Joseph J. Baker, Nashville; Dan Sanders, Nashville; G. H. Aivazian, Memphis; Carl C. Gardner, Jr., Columbia; P. J. Sparer, Memphis; Clifton E. Irwin, Knoxville; Robert G. Jordan, Memphis.

Committee on Health Project Contest—Lawrence L. Cohen, Chairman, Memphis; S. Martin Bronson, Elizabethton; George K. Henshall, Chattanooga; Wallace H. Hall, Jr., Nashville; Mrs. John C. Pryse, LaFollette.

Committee on Sight Conservation—Fred Rowe, Jr., Chairman, Nashville; David H. Turner, Chattanooga; Reese W. Patterson, Jr., Knoxville; William H. Roberts, Humboldt; James W. Wilkes, Jr., Columbia; Chas. O. Parker, Johnson City; Howard R. Kennedy, Clarksville; G. H. Berryhill, Jackson; William A. Garrott, Cleveland; Roland H. Myers, Memphis.

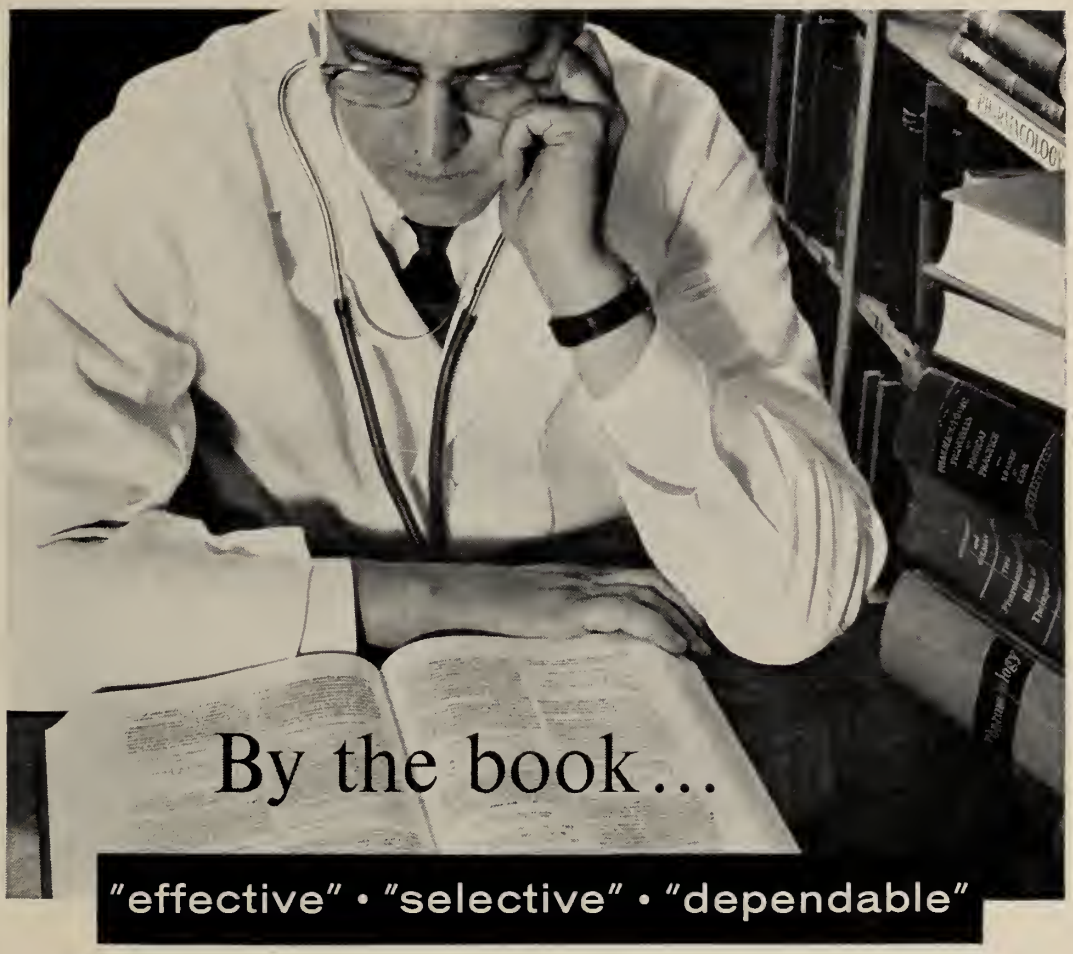
Tennessee Committee for the American Medical Education and Research Foundation—David S. Carroll, Chairman, Memphis; Laurence A. Grossman, Nashville; D. T. Rolfe, Nashville.

Interprofessional Liaison Committee—Robert M. Ruch, Chairman, Memphis; Fred P. Sage, Memphis; C. J. Wells, Elizabethton; William H. Edwards, Nashville; Edwin F. Chobot, Jr., Chattanooga.

Committee on Youth and Education—Ben D. Hall, Chairman, Johnson City; Robert G. Brashear, Knoxville; Robert M. Foote, Nashville; Dan Sanders, Nashville; Minnie R. Vance, Chattanooga; Lawrence L. Cohen, Memphis; W. M. Phillips, Trenton; J. Kelley Avery, Union City; Harold K. Alsobrook, Jackson.

Committee on Medicine and Religion—T. G. Pennington, Chairman, Nashville; H. Dewey Peters, Knoxville; Gilbert J. Levy, Memphis; John P. Nash, Memphis; Ira L. Arnold, Chattanooga.

Committee on Tuberculosis—Hollis E. Johnson, Chairman, Nashville; Carl A. Hartung, Chattanooga; R. B. Turnbull, Memphis; R. David Taylor, Dyersburg; L. A. Killeffer, Harriman; James E. Shull, Kingsport.



PRO-BANTHĪNE®

BRAND OF propantheline bromide

For Ten Years... the Standard Anticholinergic

Many studies by many investigators over many years have established Pro-Banthīne (propantheline bromide) as the standard anticholinergic in the management of peptic ulcer and other gastrointestinal disorders.

It Is Effective—Hundreds of comparative laboratory and clinical trials and innumerable gratified patients have made Pro-Banthīne (propantheline bromide) the most widely-prescribed medication in its class.

It Is Selective—Its major effect is on the gastrointestinal and urogenital tracts. Secondary activity when noticeable seldom passes the point of temporary annoyance.

It Is Dependable—Moderate doses reduce gastric secretion and acidity and diminish gastrointestinal hypermotility. The usual dosage may be safely doubled or tripled to suppress symptoms in patients with severe or refractory conditions.

These qualities have won such wide recognition in standard texts on pharmacology and therapeutics that to prescribe Pro-Banthīne (propantheline bromide) is truly to prescribe "by the book."

The usual adult dosage is one tablet of 15 mg. with meals and two at bedtime.

Side Effects And Cautions—Urinary hesitancy, xerostomia, mydriasis and, theoretically, a curare-like action may occur with Pro-Banthīne (propantheline bromide). It is contraindicated in patients with glaucoma or severe cardiac disease.

Pro-Banthīne (propantheline bromide) is supplied as tablets of 15 mg. and, for parenteral use, as serum-type ampuls of 30 mg.

G. D. SEARLE & CO.
CHICAGO, ILLINOIS 60680
Research in the Service of Medicine

REFER EYE PATIENTS
TO AN
EYE PHYSICIAN

By so doing, you will be assured of a complete diagnosis of your patients' eyes.

Guild Opticians complete the cycle for Professional Service.

GUILD OF PRESCRIPTION OPTICIANS OF AMERICA

BE SAFE—BE SURE

SEE

YOUR GUILD OPTICIAN

FOR

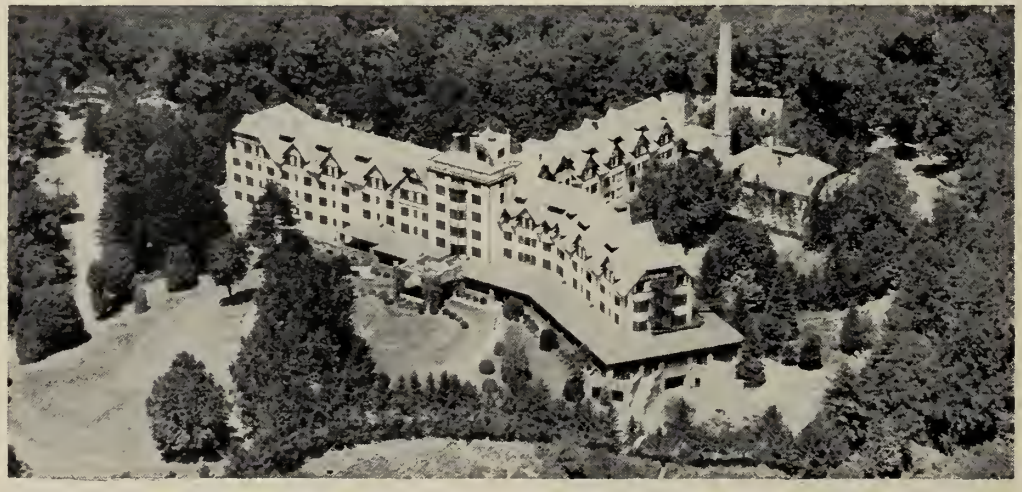
THE BEST SERVICE

EYE PHYSICIANS: Please Note—

Your prescriptions for glasses are "SAFE" when referred to a Guild Optician. Bound by the code of Ethics to uphold the highest standards in optical service.

APPALACHIAN HALL
Established 1916

Asheville North Carolina



An Institution for the diagnosis and treatment of Psychiatric and Neurological illnesses, rest, convalescence, drug and alcohol habituation.
Insulin Coma, Electroshock and Psychotherapy are employed. The Institution is equipped with complete laboratory facilities including electroencephalography and X-ray.
Appalachian Hall is located in Asheville, North Carolina, a resort town, which justly claims an all around climate for health and comfort. There are ample facilities for classification of patients, rooms single or en suite.

WM. RAY GRIFFIN, JR., M.D. MARK A. GRIFFIN, SR., M.D.
ROBERT A. GRIFFIN, M.D. MARK A. GRIFFIN, JR., M.D.

For rates and further information write
Appalachian Hall, Asheville, N. C.

SAINT ALBANS

PSYCHIATRIC HOSPITAL

(A Non-Profit Organization)

Radford, Virginia

Telephone: 639-2482

STAFF

James P. King, M.D., Director

William D. Keck, M.D.
Clinical Director
James K. Morrow, M.D.
Silas R. Beatty M.D.
Jack M. Rogers, M.D.

Edward W. Gamble, III, M.D.
Morgan E. Scott, M.D.
Jean M. Glasgow, M.D.
J. William Giesen, M.D.
Internist (Consultant)

Clinical Psychology:

Thomas C. Camp, Ph.D.
Artie L. Sturgeon, Ph.D.

Don Phillips
Administrator

AFFILIATED CLINICS

Bluefield Mental Health Center
525 Bland St., Bluefield, W. Va.
David M. Wayne, M.D.
Phone: 325-9159

Beckley Mental Health Center
109 E. Main Street, Beckley, W. Va.
W. E. Wilkinson, M.D.
Malcolm G. MacAulay, M.D.
Phone: 253-8397

Charleston Mental Health Center
1119 Virginia St., E., Charleston, W. Va.
Richard D. Kitching, M.D.
Phone: 344-3578

Norton Mental Health Clinic
Norton Community Hospital, Norton, Va.
Pierce D. Nelson, M.D.
Phone: 1090



YOU:

HISTORY: 20 years of study, plus internship/residency. Substantial investment in professional location, equipment. **SIGNS and SYMPTOMS**: Reports that large home, growing family and minimal professional standard of living are a concern. Still ahead—college costs, retirement, natural estate ambitions. **PROGNOSIS**: Needs 15-20 peak years of income to pay off education, home; rear family; retire. All this while battling tough taxes, and without the benefit of social security or company paid life and disability insurance, pension plan. **TREATMENT**: Learn about Mutual Benefit Life's "Seven Significant Benefits". Talk with a M.B.L. representative. See how a built-for-you plan solves specific problems through unique disability clauses, unusually high cash and loan values, liberal survivor income options—and more. Write on your own professional letterhead for exclusive report covering a full range of typical insurance requirements for physicians. Just ask for a copy of *Consultant's Report*.

Those who plan ahead get ahead **MUTUAL BENEFIT LIFE** INSURANCE COMPANY, NEWARK, NEW JERSEY

CARRIER OF YOUR TENNESSEE MEDICAL ASSOCIATION GROUP LIFE INSURANCE PLAN

EDWARD C. DUNN
1104 Sudekum Bldg.
Nashville, Tenn.

SETH W. SIZER
1211 James Bldg.
Chattanooga, Tenn.

THERON M. LEMLY
1309 Poplar Ave.
Memphis, Tenn.

Nashville Surgical Supply Company

The Physician and Hospital's Complete Supply & Service Source

Physicians equipment and supplies

Hospital equipment and supplies

Laboratory equipment and supplies

THE MOST COMPLETE DRUG AND BIOLOGICAL SUPPLY SOURCE IN TENNESSEE

Distributor for Standard and Mattern X-Ray Equipment and Supplies

24-Hour Emergency Service

Nashville Surgical Supply Co., Incorporated

1911 Church St.

Nashville, Tennessee

Phone AL 5-4601



Doctor, you can take it with you!



THE BURDICK EK-III **DUAL-SPEED ELECTROCARDIOGRAPH**

- 26½ pounds light, including all accessories and carrying case! Ideal for office or bedside use
- 25 or 50 mm. speed — an accurate record for an accurate diagnosis
- frequency response greatly in excess of minimum A.M.A. standards
- top-loading paper drive eliminates tedious paper-threading adjustments

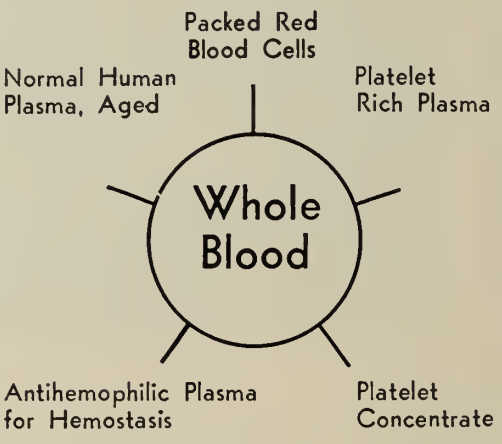
Burdick

THE BURDICK CORPORATION
MILTON, WISCONSIN
Branch Offices: New York • Chicago • Atlanta • Los Angeles
Dealers in all principal cities

KAY SURGICAL, INC.
1144 Madison Ave. Memphis, Tenn.

Follow the trend to

BLOOD COMPONENT THERAPY



Best for the patient and More Economical.

All available from

BLOOD BANK FOUNDATION

1921 Broadway ALpine 4-3551
NASHVILLE, TENNESSEE

Tennessee Medical Association's

Exclusively Approved

GROUP DISABILITY INCOME PROGRAM

Administered By

Smith, Reed, Thompson & Ellis Co.

1322 Nashville Trust Building
NASHVILLE 3, TENNESSEE
Phone 255-7625

WILLIAM H. ELLIS, C. L. U. MGR.
THOMAS G. HENRY

ASSOCIATES

Alden H. Smith, C. L. U.

Arthur D. Reed, C. L. U.

Joe Thompson, Jr., C. L. U.

Alden H. Smith, Jr., C. L. U.

E. Dan Smith, II

Underwritten By

Commercial Insurance Company

Newark, New Jersey

Professional Liability Insurance
(MALPRACTICE)

Policy and Rates Approved
by the
TENNESSEE MEDICAL ASSOCIATION



Standard Coverage That SAVES YOU 35%

Class 1—Physicians doing no surgery

Class 2—Physicians doing minor surgery or assisting in major surgery on own patients

Class 3—Surgeons - General Practitioners who perform major surgery or assist in major surgery on other than their own patients and specialists: Anesthesiologists, Cardiologists (including catheterizations, but not including surgery), Ophthalmologists and Proctologists

Class 4—Surgeons - Specialists

Limits	Class 1	Class 2	Class 3	Class 4
5/15	$ 37.05	$ 46.15	$ 89.05	$133.25
10/30	50.02	62.30	120.22	179.89
25/75	63.36	78.92	152.28	227.86
50/150	70.02	87.22	168.30	251.84
75/225	74.10	92.30	178.10	266.50
100/300	76.32	95.07	183.44	274.50
200/300	79.66	99.22	191.46	286.49
300/300	81.88	101.99	196.80	294.48
200/500	88.77	108.61	202.13	298.49
500/500	93.59	114.61	213.71	315.81
500/1 million	114.70	135.99	236.37	339.81
1 million/1 million	120.25	142.91	249.73	359.79

1. Partnership liability, increase premium for each partner by 20%.
2. X-Ray Therapy and Shock Therapy quotations made on request.
3. Premises Liability (bodily injury, property damage and medical payments) Minimum premium $8.00.

FARRINGER & CO.
Phone 524-7335
Knoxville, Tennessee

FARRINGER & CO.
Phone 276-7331
Memphis, Tennessee

FAW & SHERROD
Phone 926-8164
Johnson City, Tennessee

INGLE-KNOX INSURANCE AGENCY
Phone 265-4541
Chattanooga, Tennessee

LIPSCOMB & PITTS CO.
Phone 272-2515
Memphis, Tennessee

Your policy backed by Assets over $42,000,000.00

Shelby Mutual Insurance Company
of Shelby, Ohio

*20% off on Hospital—Professional Liability

For Information on Hospital-Professional Liability and other coverages, please contact one of the agents listed.

PLACEMENT SERVICE

The Placement Service of the Tennessee Medical Association is designed to assist doctors and communities. Further information and contacts, to both physicians and communities, is available from the Public Service Office, 112 Louise Avenue, Nashville, Tennessee—telephone 291-4584.

Locations Wanted

GENERAL SURGEON, age 31, graduate of the Western Reserve University School of Medicine, wants associate, clinical, or solo practice in any city in Tennessee of 10,000 plus. Now in fourth year residency; will be Board eligible upon completion. Married; Protestant. Available July 1964. LW-514

◆

GENERAL PRACTITIONER, 27 years of age, graduate of the Medical College of Alabama, would like assistant, associate, or clinical practice in any size city in Tennessee. Now in military service; married; Baptist. Available July 1965. LW-515

◆

OBSTETRICIAN-GYNECOLOGIST, 30 years of age, graduate of LSU's School of Medicine, would like assistant, associate or clinical practice in any city in Tennessee of 16,000 plus. Presently in residency; married; Methodist. Available August 1964. LW-517

◆

GENERAL PRACTITIONER, age 33, graduate of the University of Miami School of Medicine, would like assistant, industrial or solo practice in Tennessee. No preference as to size or location. Married; Episcopalian. Available immediately. LW-518

◆

INTERNIST, with practice in Hematology-Cardiology, graduate of New York University School of Medicine, 38 years of age, would like associate, clinical or institutional practice in Middle or West Tennessee city of 25,000 plus. Board eligible. Married. Lutheran. Available within three months. LW-520

◆

GENERAL SURGEON, age 30, graduate University of Chicago School of Medicine, presently in military service, would like assistant or associate practice in Middle or West Tennessee city of 50,000 plus. Tennessee license; American College of Surgeons. Hebrew; married; available August 1, 1965. LW-529

◆

SURGEON (ORTHOPEDIC), age 30, graduate of the University of Tennessee College of Medicine, would like associate practice in large East or Middle Tennessee city. Now in residency; single; Protestant. Tennessee license. Available August 1964. LW-530

◆

INTERNIST, age 34, graduate of the Harvard Medical School, would like assistant, associate or clinical practice in any location in Tennessee of 25,000 plus population. Now in private practice. Married; Methodist. Available June 1, 1964. LW-531

◆

PEDIATRICIAN, age 31, graduate of the University of Arkansas, Board eligible, would like associate or clinical practice in any location of Tennessee. Now on active duty with U. S. Navy; married; Hebrew. Available July 1965. LW-532

◆

GENERAL SURGEON-PROCTOLOGY, age 32, graduate of Tulane School of Medicine, now on active duty with Air Force, would like associate or clinical practice in Middle or West Tennessee city of 10,000 plus. Residency; married; Methodist. Available September 1964. LW-533

Physicians Wanted

PHYSICIAN needed in small North Tennessee town. No other physician in county. Community has been surveyed and approved for Sears-Roebuck Foundation assistance. Business leaders pledge support of physician. PW-177

◆

GENERAL PRACTITIONER needed in East Tennessee town of about 1,000. Hospital located in town. Office space and equipment available. Good housing. Associate or assistant status. PW-192

◆

PHYSICIAN needed in Middle Tennessee town of 1,000; located in lake area. Well built, large clinic building available—lease or monthly rent. Active support of county and town officials assured; business and civic leaders will support. No other physician in immediate area. PW-195

◆

GENERAL PRACTITIONER or General Surgeon wanted as associate or assistant for large clinic in Middle Tennessee city of over 8,000. Applicant must be temperate, industrious, high morals. Residency training required. Good salary. PW-200

◆

GENERAL PRACTITIONER needed in small Middle Tennessee town of approximately 3,000 to assist now practicing physician. Good housing facilities. Office space and equipment furnished. Physician must be hospital practice. PW-202

◆

PRACTICE and office equipment of recently deceased physician in West Tennessee city of 5,000, for lease or sale. Office space consists of two examining rooms, two treatment rooms, laboratory, plus other essential facilities. General Practice with general surgery. PW-204

◆

FOR LEASE: 1,000 square feet in an uptown office building of a Middle Tennessee town of 12,500. Fully equipped with x-ray and laboratory; parking area connected; modern, centrally air-conditioned and heated. Physician left to enter institutional practice. PW-205

◆

INDUSTRIAL PHYSICIAN, 25-40 years of age, needed for industrial medicine by large concern in East Tennessee city of 180,000. Office space and equipment provided. Regular office hours. Will assist in obtaining housing if desired. Salary and fringe benefits. Excellent position. PW-206

◆

ANESTHESIOLOGIST, certified or board eligible, under 40 years of age. Fee-for-service practice in growing group, full partnership opportunity in short time. University city; East Tennessee. Desired terms and autobiography initial reply. PW-207

◆

WILL BUILD office or clinic, space for two or more physicians, in Middle Tennessee town of over 12,000, near government installation. Location of building will be adjacent to shopping area located near over 1,000 families of approximately high incomes. New city hospital planned; present hospital private, 35 bed. PW-208

Is There A Doctor - - - -

WHO WANTS TO DRIVE A NEW CAR—

With No Capital Investment . . . Simplified Tax Deductions . . . Which May Save You Money . . . And No Worries About—Maintenance . . . Depreciation . . . Tires . . . Insurance . . . Or License?

Call or Visit the Lease Department of

OAK FORD SALES AND SERVICE **MOTORS**

915 FIFTH AVE. NORTH
NASHVILLE 3, TENN.

Tel. AL 5-8661

We are a member of Largest Leasing System in the U. S.

Ford AUTHORIZED LEASING SYSTEM

List of Advertisers in This Issue

American Cyanamid Company	XIII, XXI, XXIV
American Tobacco Co., The	XVIII
Ames Co., Inc.	XLI
Appalachian Hall	XXXII
Blood Bank Foundation	XXXVI
Burroughs Wellcome & Co.	VIII, XVI
Chatham Pharmaceuticals, Inc.	X
Coca-Cola	XX
Farringer & Company	XXXVIII
Geigy Pharmaceuticals	XII
Guild Opticians	XXXII
Gyne-Cytology Laboratory, Inc.	XXVIII
Hill Crest Sanitarium	XXVIII
Jewish Hospital of St. Louis	XX
Kay Surgical, Inc.	XXXVI
Liggett & Myers Tobacco Co.	XXVI, XXVII
Lilly, Eli and Co.	I, XXX
McQuiddy Printing Co.	XVI
Mutual Benefit Life Ins. Co.	XXXIV
Nashville Surgical Supply Co., Inc.	XXXV
Oak Motors	XL
Parke-Davis and Company	II
Physicians Products Co., Inc.	XXV
Placement Service	XXXIX
Robins, A. H. Co.	XI, XIV, XV, XXIX
Roche Laboratories	XLII
St. Albans	XXXIII
Searle, G. D. & Co.	XXXI
Smith, Kline & French Laboratories	VI
Smith, Reed, Thompson & Ellis Co.	XXXVII
Squibb	III
Tafel Surgical Supply Co., Inc.	XX
U. S. Vitamin & Pharmaceutical Corp.	IX
VA Hospital, Tuskegee, Ala.	XXVIII
Wallace Laboratories	VII, X, XVII, XIX, XXII, XXIII
White Surgical Supply Co.	XXVIII
Winthrop Laboratories	V



Don't feel sorry for **ACETEST**® Reagent Tablet — It still does a good job. But new, improved **KETOSTIX**® "dip-and-read" test for ketone bodies in urine, serum, or plasma, is more convenient. It's faster (only 15 seconds) and more sensitive. When you use **KETOSTIX** Reagent Strips you don't even need a medicine dropper. Simply dip and read **KETOSTIX** and get a more definitive detection of ketone bodies. Still like **ACETEST** Reagent Tablets? That's okay, but remember, we said, "**KETOSTIX** Reagent Strips are more modern." □ Ames Company, Inc., Elkhart, Indiana. 69964

AMES

anxiety
anxiety
anxiety
anxiety
anxiety
anxiety
anxiety
anxiety
anxiety
anxiety
anxiety reduced to its proper perspective

LIBRIUM®
(chlordiazepoxide H
the successor
to the tranquilizers

ROCHE

In prescribing: Dosage—Adults: Mild to moderate anxiety and tension, 5 or 10 mg t.i.d. or q.i.d.; severe states, 20 or 25 mg t.i.d. or q.i.d. G patients: 5 mg b.i.d. to q.i.d. Cautions—Occasional side effects, often dose-related, are drowsiness, ataxia, minor skin rashes, menstrual irregu nausea and constipation. Paradoxical reactions may occasionally occur in psychiatric patients. Individual maintenance dosages should be dete Advise patients against possibly hazardous procedures until maintenance dosage is established. Though compatible with most drugs, use care i bining with other psychotropics, particularly MAO inhibitors or phenothiazines; warn patients of possible combined effects with alcohol. Observ precautions in impaired renal or hepatic function, and in long-term treatment. Caution should be exercised in prescribing any therapeutic ag pregnant patients. Supplied—Capsules, 5 mg, 10 mg and 25 mg, bottles of 50 and 500.

LIBRARY OF THE RHODE ISLAND MEDICAL SOCIETY

THE JOURNAL OF THE TENNESSEE MEDICAL ASSOCIATION

ANNUAL CONVENTION
AMERICAN MEDICAL ASSOCIATION
June 20-26, 1964
San Francisco, California

JUNE, 1964

Volume 57 **Number 6**

Table of Contents on Page IV
Index to Advertisers on Page XXXVIII

AMYTAL TAKES THE EDGE OFF DAYTIME ANXIETY AND TENSION

Amytal is a moderately long-acting barbiturate that takes the edge off daytime anxiety and tension without significant change in mood and attitude. Since Amytal is metabolized in the liver within twenty-eight hours, overlapping of effect is minimized, and renal damage does not constitute a contraindication.

Side-Effects: Idiosyncrasy or allergic reactions to the barbiturates may occur.

Precautions and Contraindications: Amytal should be used with caution in patients with decreased liver function, since a prolongation of effect may occur. Administration in the presence of uncontrolled pain may produce excitement. WARNING—May be habit-forming.

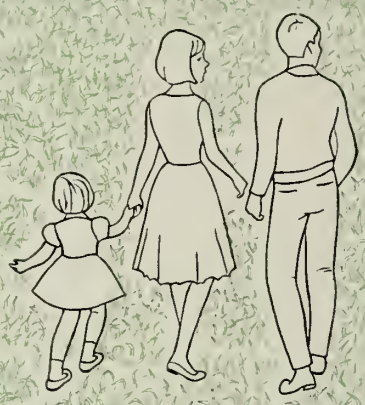
Dosage: Doses should be individualized for each patient. The usual adult sedative dosage ranges from 30 mg. (1/2 grain) to 50 mg. (3/4 grain) two or three times daily.

Additional information available upon request. Eli Lilly and Company, Indianapolis 6, Indiana.

AMYTAL® AMOBARBITAL

Lilly

400152



pollens in the grass...alas

Kapseals®
Benadryl®
(diphenhydramine hydrochloride)

FOR EFFECTIVE CONTROL OF ALLERGIC SYMPTOMS—*Antihistaminic action* relieves nasal congestion, sneezing, lacrimation, and pruritus. *Antispasmodic action* relieves bronchial spasm. **Precautions:** Persons who have become drowsy on this or other antihistamine-containing drugs, or whose tolerance is not known, should not drive vehicles or engage in other activities requiring keen response while using this product. Hypnotics, sedatives, or tranquilizers, if used with BENADRYL (diphenhydramine hydrochloride), should be prescribed with caution because of possible additive effect. Diphenhydramine has an atropine-like action which should be considered when prescribing BENADRYL (diphenhydramine hydrochloride). BENADRYL (diphenhydramine hydrochloride) is supplied in several forms including Kapseals containing 50 mg. 39864

PARKE-DAVIS
PARKE, DAVIS & COMPANY, Detroit, Michigan 48232

Announcing A New Series of Monographs . . .

MAJOR PROBLEMS IN CLINICAL SURGERY

J. Englebert Dunphy, Consulting Editor

Each volume in this series will exhaustively illuminate a significant problem met in surgical practice. Offering a consistently post-graduate level of presentation, the books will give comprehensive accounts of all aspects of their subject, to aid you in accomplishing the most successful surgical management possible today. Each eminently qualified specialist-author will present a critical analysis of changing approaches to therapy, of etiology, pathologic physiology, diagnosis and differential diagnosis. Operative techniques will be clearly described and illustrated. Operative and postoperative complications will be considered. Several volumes will appear each year, containing 150-300 illustrated pages. Future monographs will cover: *Polyps of the Gastrointestinal Tract; Trauma to the Liver; Surgical Problems of the Pancreas; Peripheral Arterial Disease.* By becoming a charter subscriber to the entire series, starting with the first volume, you are offered free examination of every book, with absolutely no obligation to buy even one volume. Merely check the appropriate block on the coupon.

The First Volume in the Series—Now Ready

The Liver and Portal Hypertension

by Charles G. Child, 3rd, M.D.

In this new monograph, Dr. Child and 12 collaborators present a complete picture of the nature of portal hypertension and its surgical management. You will find discussions of such vital surgical considerations as: *the effectiveness of portacaval and splenorenal shunts; selection of patients for operation; arguments for and against "prophylactic" shunt procedures in the patient with esophageal varices; relative advantages of end-to-side and side-to-side shunting.* Management of the patient with active bleeding esophageal varices is helpfully discussed. In addition, Dr. Child and his eminent collaborators evaluate current concepts of pathologic physiology of portal hypertension; they detail the essentials of medical and supportive management.

By Charles G. Child, 3rd, M.D., Professor and Chairman, Department of Surgery, University of Michigan Medical School. With 12 Collaborators from the Departments of Medicine and of Surgery of the University of Michigan and the Department of Surgery of New York University. About 224 pages, 6⅛" x 9¼", illustrated. About $7.50. *New—Just Ready!*

New!—Beard and Wood-MASSAGE

PRINCIPLES AND TECHNIQUES

Here is an authoritative manual to help you become more skillful in utilizing the beneficial effects of massage—help in developing or regaining elasticity of tissues; stimulating blood supply; decreasing pain and discomfort; providing psychological stimulation to use disabled parts. The book is the final product of methods evolved from 35 years of experience with massage at Northwestern University Medical School. The well-known authors give you concise, well-illustrated and clearly defined instructions on *massage movements, on the components of massage—on equipment, position of patient, routine of treatment—on step-by-step techniques of general and local massage—on effects of massage on muscle tissue, blood, skin, bone, metabolism, abdominal viscera, etc.* They give advice on where and when massage can be used effectively—before and after surgery—for the prevention of decubital ulcer and muscle atrophy in the bedridden patient. You'll find help on *kneading, petrissage, stroking and effleurage, percussion, pressure, rate and rhythm, duration, frequency.* Advice on tables, mattresses, linen and pillows is also included. For practical help in utilizing and developing skill in massage, add this new manual to your library.

By Gertrude Beard, R.N., R.P.T., Formerly Associate in Physical Medicine and Technical Director, Course in Physical Therapy, Northwestern University Medical School; and Elizabeth C. Wood, A.M., R.P.T., Associate Professor of Physical Medicine and Educational Administrator, Programs in Physical Therapy, Northwestern University Medical School. About 176 pages, 7¼" x 10¼", with about 250 illustrations. About $6.00. *New—Just Ready!*

New!—1963-64 MAYO CLINIC VOLUMES

You'll find here the new treatments, surgical techniques, and diagnostic methods developed at the Mayo Clinic this past year. The Clinic's investigations covered virtually the entire body, including many specialty areas of practice: *Alimentary Tract—Genitourinary Tract—Ductless Glands—Blood and Circulatory Organs—Head, Trunk and Extremities—Dermatology—Thorax—Brain, Spinal Cord and Nerves—Radiology—Anesthesia, Gas and Intravenous Therapy.* For easier reference the articles (approximately 230) are organized into two separate volumes—one on Medicine and one on Surgery. Among the articles in the Medicine volume you'll find discussions on: *Pain Patterns of Gastric Disorders—A Simplified Menstrual Record—Reevaluation of Therapy of Acute Myocardial Infarction—Unusual Systemic Manifestations Associated with Carcinoma.* Articles in the Surgery volume include discussions of: *Considerations Relevant to Gastric Freezing—Transrectal Needle Biopsy as an Office Procedure—Conservative Surgical Management of Endometriosis—Pitfalls in Vein Surgery—An instrument for Colorectal Anastomosis Without Sutures—etc.* The books are available either separately, or as a slip-cased set. Why not put this practical, up-to-date advice from the Mayo Clinic to work in *your* practice?

Volume 55. By the Staff of the Mayo Clinic, Rochester, Minnesota, and the Mayo Foundation, University of Minnesota. Volume on **Medicine**, about 544 pages, 6" x 9⅛", illustrated. About $13.50. Volume on **Surgery**, about 560 pages, 6" x 9⅛", illustrated. About $13.50. Slip-cased Set about $25.00.

New—Just Ready!

W. B. SAUNDERS COMPANY West Washington Square, Phila. 5, Pa. SJG 6-64

Please send and bill me:

☐ Easy Pay Plan ($5 per mo.)

☐ Child—*Liver & Portal Hypertension* . . . About $7.50

☐ Beard & Wood—*Massage* . . . . . About $6.00

☐ *1963-64 Mayo Clinic Volumes* . . . Set, About $25.00

☐ Medicine . . About $13.50 ☐ Surgery . . About $13.50

A Saunders Book

☐ Also enroll Me as "No Risk" Charter Subscriber

Name_____ Address_____

The Journal of the TENNESSEE MEDICAL ASSOCIATION

Published Monthly

By Tennessee Medical Association

OFFICE OF PUBLICATION, 112 LOUISE AVENUE, NASHVILLE, TENNESSEE 37203

Second Class Postage Paid at Nashville, Tennessee

Volume 57
No. 6

JUNE, 1964

Per Year, $5.00
Single Copy, 50 Cents

Published Monthly

Contents

Identification, BLAND W. CANNON, M.D., Memphis, Tenn. 225

Abstract of the Proceedings of the House of Delegates of the Tennessee Medical Association, Memphis—April 12-15, 1964 229

Abstract of Minutes of Council Meetings, Tennessee Medical Association, Peabody Hotel—Memphis—April 12-14, 1964 259

Abstract of Minutes of the Meeting of the Board of Trustees, Tennessee Medical Association—Peabody Hotel—Memphis—April 15, 1964 260

Clinicopathologic Conference 262

President's Letter 270

Editorial 271

Deaths 272

Programs and News of Medical Societies 272

National News 273

Medical News in Tennessee 275

Personal News 277

Announcements 277

Placement Service 279

Instructions to Contributors

Manuscripts submitted for consideration for publication in the JOURNAL OF THE TENNESSEE MEDICAL ASSOCIATION should be addressed to the Editor, Dr. R. H. Kampmeier, Vanderbilt University Hospital, Nashville 12, Tennessee.

Manuscripts must be typewritten on one side of letter-weight paper. Either double or triple spacing and wide margins must be provided to facilitate editing which will be legible for the printer.

Bibliographic references should not exceed ten or twelve in number documenting key publications. They should appear at the end of the paper. The bibliographic references must conform to the style used in the American Medical Association publications, as,—Alais, F. G.: What Is Known About It, J. Tennessee M. A., 35:132, 1950.

Illustrations must be mounted on white cardboard and be numbered. The editor will determine the number, if any, of illustrations to be used. Additional illustrations will be charged to the author. The author's name should appear on the back of each illustration.

If reprints are desired, the requested number should be indicated in the letter accompanying the manuscript. The author will be billed by the publisher.

DEVOTED TO THE INTERESTS OF THE MEDICAL PROFESSION OF TENNESSEE

R. H. KAMPMEIER, M.D., Editor

This Association Does Not Officially Indorse Opinions Presented in Different Papers Published herein

Copyright, 1964, by the Tennessee Medical Journal

For the "modern Cinderella"

pHisoHex®

enhances any acne treatment



"...No other disease has caused so much feeling of inferiority" as acne.[1] pHisoHex "...is a valuable part of the management...since in addition to its defatting and cleansing properties, it offers an antibacterial action which reduces skin bacterial flora."[2]

In a series of 42 patients, none "...failed to improve," when pHisoHex was added for the wash.[3] In another series of 67, acne lesions "...cleared in a matter of one to two weeks" in 50 per cent with pHisoHex.[4] In another series of 100 patients using pHisoHex and pHisoAc®, 79 showed excellent or good improvement.[2]

The frequent exclusive use of pHisoHex enhances adsorption of its 3% hexachlorophene content to the skin; there it remains as a tenacious film to fight bacteria *between* washings. pHisoHex cleans thoroughly—is nonalkaline, hypoallergenic and "kind" to the skin. Three to four washings a day are needed for constant degerming of skin, faster and better results.

pHisoAc Cream dries, peels and masks lesions—helps prevent comedones, pustules and scarring. Contains colloidal sulfur 6 per cent, resorcinol 1.5 per cent and hexachlorophene 0.3 per cent.

How supplied: pHisoHex is available in unbreakable squeeze bottles of 5 oz. and 1 pint, in unbreakable plastic bottles of 1 gallon and in combination package with pHisoAc Cream.

References: 1. Szymanski, F. J.: *Indust. Med.* 30:498, Nov., 1961. **2.** Wexler, Louis: *Clin. Med.* 70:404, Feb., 1963. **3.** Hodges, F. T.: *GP* 14:86, Nov., 1956. **4.** McLean, I. E. D.; Graham, K. T., and East, M. O.: *Practitioner* 189:82, July, 1962.

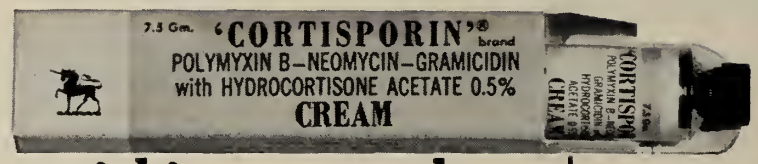
Winthrop

Winthrop Laboratories, New York, N. Y.



(1888-M)

CHOOSE THE PRODUCT TO FIT THE NEED



a new vanishing cream base



a special low melting point base

anti-inflammatory
bactericidal
antipruritic
rarely sensitizing

CREAM—*Ingredients:* Each gram contains 'Aerosporin'® brand Polymyxin B* Sulfate 10,000 Units; Neomycin Sulfate (equivalent to 3.5 mg. Neomycin Base) 5.0 mg.; Gramicidin 0.25 mg.; Hydrocortisone Acetate 5.0 mg. (0.5%).

In a smooth, white, water-washable vanishing cream base with a pH of approximately 5.0. Inactive ingredients: liquid petrolatum, white petrolatum, propylene glycol, polyoxyethylene polyoxypropylene compound, emulsifying wax, distilled water, and 0.25% methylparaben as preservative.

Available: In tubes of 7.5 Grams.

OINTMENT—*Ingredients:* Each gram contains 'Aerosporin'® brand Polymyxin B* Sulfate 5,000 Units; Zinc Bacitracin 400 Units; Neomycin Sulfate 5 mg. (equivalent to 3.5 mg. Neomycin Base); Hydrocortisone 10 mg. (1%).

In a special white petrolatum base.

Available: In tubes of ½ oz. and ⅛ oz.

*U.S. Patent Nos. 2,565,057–2,695,261

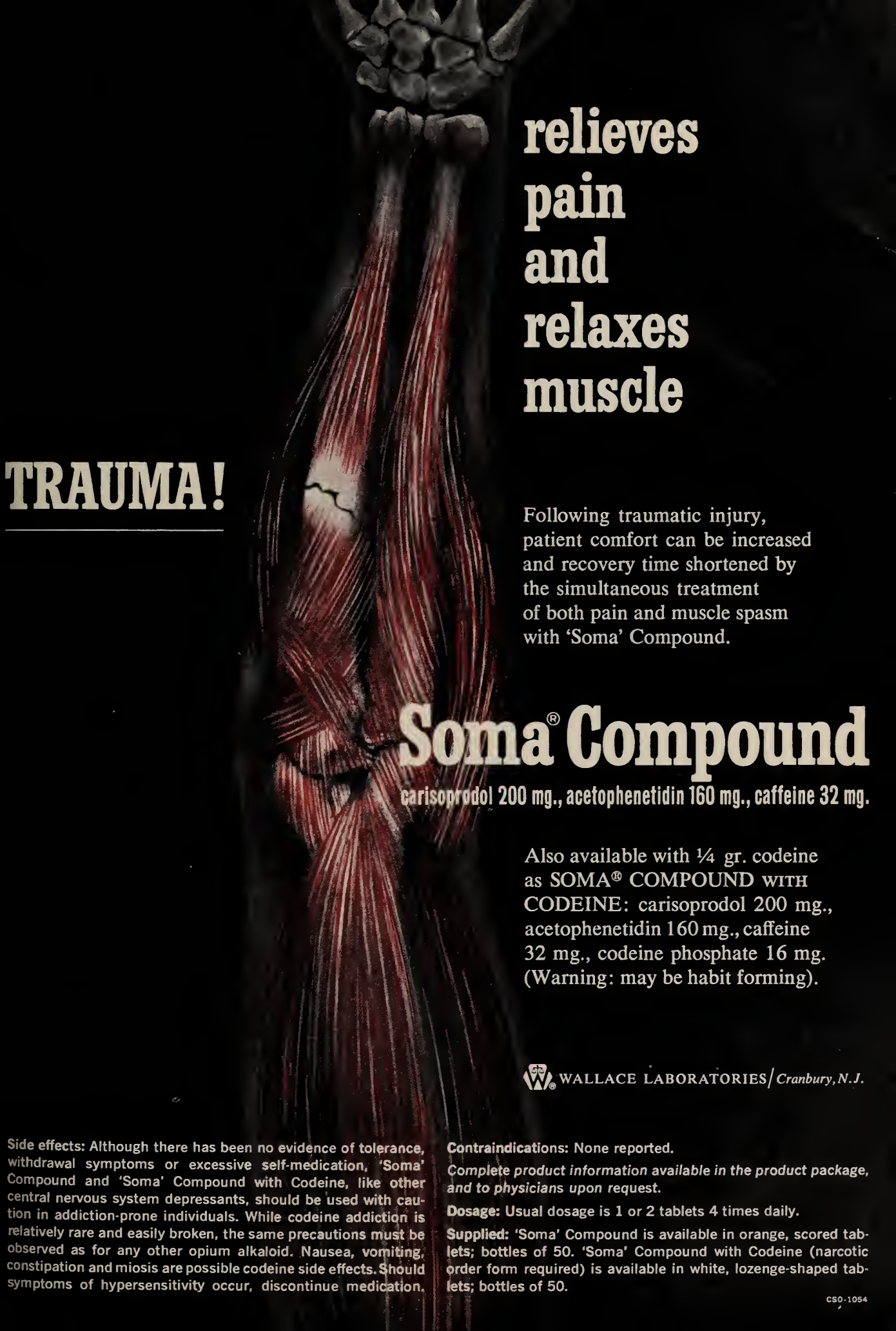
Indications: Wherever inflammation or infection occurs and is accessible for topical therapy.

Contraindications: These drugs are contraindicated in tuberculous, fungal or viral lesions (herpes simplex, vaccinia and varicella).

Caution: As with other antibacterial preparations, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs.

Complete literature available on request from Professional Services Dept. PML.

BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, N.Y.



relieves pain and relaxes muscle

TRAUMA!

Following traumatic injury, patient comfort can be increased and recovery time shortened by the simultaneous treatment of both pain and muscle spasm with 'Soma' Compound.

Soma® Compound

carisoprodol 200 mg., acetophenetidin 160 mg., caffeine 32 mg.

Also available with ¼ gr. codeine as SOMA® COMPOUND WITH CODEINE: carisoprodol 200 mg., acetophenetidin 160 mg., caffeine 32 mg., codeine phosphate 16 mg. (Warning: may be habit forming).

WALLACE LABORATORIES / *Cranbury, N.J.*

Side effects: Although there has been no evidence of tolerance, withdrawal symptoms or excessive self-medication, 'Soma' Compound and 'Soma' Compound with Codeine, like other central nervous system depressants, should be used with caution in addiction-prone individuals. While codeine addiction is relatively rare and easily broken, the same precautions must be observed as for any other opium alkaloid. Nausea, vomiting, constipation and miosis are possible codeine side effects. Should symptoms of hypersensitivity occur, discontinue medication.

Contraindications: None reported.

Complete product information available in the product package, and to physicians upon request.

Dosage: Usual dosage is 1 or 2 tablets 4 times daily.

Supplied: 'Soma' Compound is available in orange, scored tablets; bottles of 50. 'Soma' Compound with Codeine (narcotic order form required) is available in white, lozenge-shaped tablets; bottles of 50.

CSO-1054



one of the fundamental drugs in medicine

Smith Kline & French Laboratories

SK&F

most effective in the obese diabetic...

Recent reports suggest...insulin and sulfonylureas may accelerate lipogenesis,[1-5]...serum "insulin" levels are often elevated in obese diabetics[2,3,6]... DBI (phenformin HCl) reduces high blood sugars, lowers elevated "insulin" levels, tends to reduce body weight toward normal.[1,3,7-9]

In the obese diabetic (ketoacidosis-resistant), use of phenformin HCl together with a proper diet: **A.** acts to reduce high blood sugar without increasing fat synthesis or weight gain. **B.** does not increase already elevated endogenous insulin levels; may, indeed, act to restore more normal insulin levels. **C.** favors reduction of weight towards normal.

In the ketoacidosis-resistant obese diabetic not amenable to diet alone, hypoglycemic phenformin HCl appears to help avoid weight gain or reduce adiposity, factors which otherwise tend to make blood sugar control more difficult and to increase the likelihood of complications. However, in the ketoacidosis-prone diabetic, insulin is still the essential hypoglycemic agent.



Summary: Indicated in stable adult diabetes, sulfonylurea failures and unstable diabetes. Gastrointestinal side effects occurring more often at higher dosage levels abate promptly upon dosage reduction or temporary withdrawal. Occasionally an insulin-dependent patient will show "starvation" ketosis (acetonuria without hyperglycemia) which must be differentiated from "insulin-lack" ketosis, and treated accordingly. Use with caution in severe liver disease. Not recommended without insulin in acute complications (acidosis, coma, infections, gangrene, surgery). Consult product brochure for full information.

Bibliography: 1. Williams, R. H.: Textbook of Endocrinology, Ed. 3, Saunders, Philadelphia, 1962, p. 610. 2. Gordon, E. S.: Metabolism 11:819, 1962. 3. Grodsky, G. M. et al.: Metabolism 12:278, 1963. 4. Sadow, H. S.: Metabolism 12:333, 1963. 5. West, K. M. and Tophoj, E.: Metabolism 10:689, 1961. 6. Yalow, R. S. and Berson, S. A.: Diabetes 9:254, 1960. 7. Weller, C. et al.: Scientific Exhibit, A.M.A., June 1962. 8. Weller, C. et al.: Metabolism 11:1134, 1962. 9. Radding, R. S. et al.: Metabolism 11:404, 1962.

tablets 25 mg. **DBI®** **timed-disintegration capsules 50 mg.** **DBI-TD®**

BRAND OF PHENFORMIN HCl

U. S. VITAMIN & PHARMACEUTICAL CORP. 800 SECOND AVENUE NEW YORK, N.Y. 10017

reduce or obviate the need for transfusions and their attendant dangers

KOAGAMIN is indicated whenever capillary or venous bleeding presents a problem. KOAGAMIN has an outstanding safety record -- in 25 years of use no report of an untoward reaction has been received; however, it should be used with care on patients with a predisposition to thrombosis.



KOAGAMIN®

parenteral hemostat

Each cc contains: 5 mg. oxalic acid, 2.5 mg. malonic acid, phenol 0.25%; sodium carbonate as buffer.

Complete data with each 10cc vial. Therapy chart on request.

CHATHAM PHARMACEUTICALS, INC.
Newark 2, New Jersey
Distributed in Canada by Austin Laboratories, Ltd. • Paris, Ontario



- **PETN (pentaerythritol tetranitrate) to increase oxygen supply**
- **plus meprobamate to decrease anxiety and tension**

Unlike phenobarbital, meprobamate is *not* cumulative and does *not* cause depression.

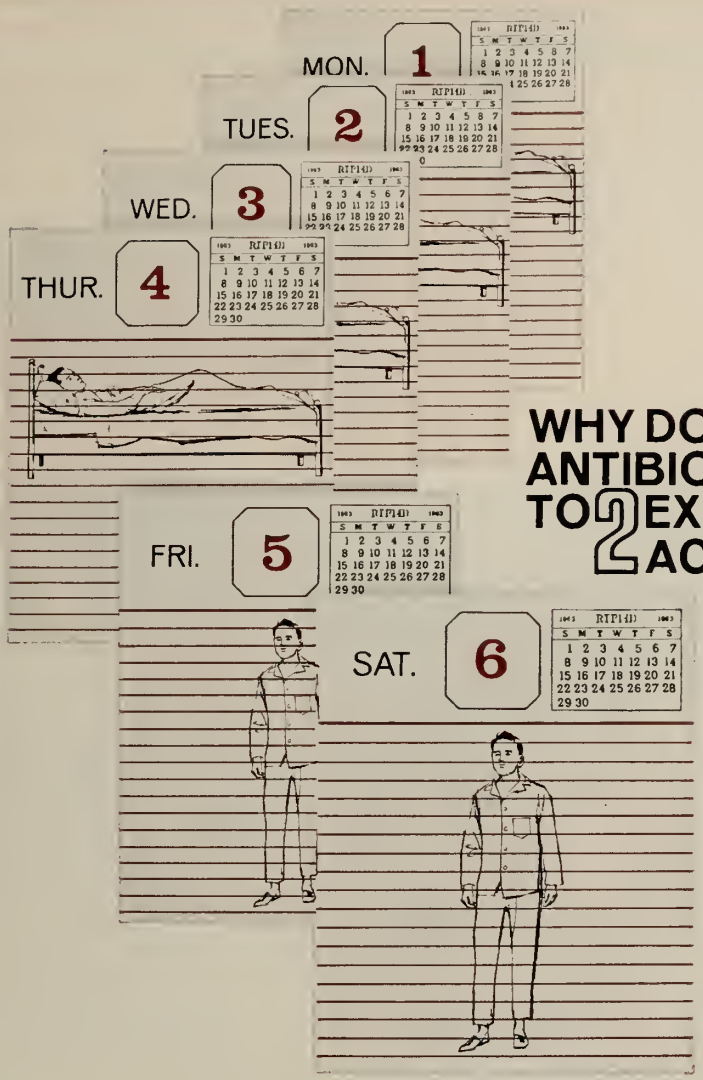
Side effects: Pentaerythritol tetranitrate may infrequently cause nausea and mild headache, usually transient. Slight drowsiness may occur with meprobamate and, rarely, allergic reactions. **Precautions:** Meprobamate may increase effects of excessive alcohol. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction. **Contraindications:** Like all nitrate-containing drugs, 'Miltrate' should be given with caution in glaucoma. *Complete product information available in the product package, and to physicians upon request.* **Dosage:** 1 to 2 tablets, *before meals* and at bedtime. Individualization required. **Supplied:** Bottles of 50 tablets.

CML-1055

MILTRATE®

meprobamate 200 mg. + pentaerythritol tetranitrate 10 mg.

WALLACE LABORATORIES / *Cranbury, N. J.*



WHY DOES ONE ANTIBIOTIC GIVE UP TO 2 EXTRA DAYS' ACTIVITY?

Because it is more resistant to disintegration, has a lower renal clearance rate than earlier tetracyclines'...a favorable depot effect resulting from protein binding and greater mg. potency...all giving higher, sustained *in vivo* activity which continues long after the last dose.

DECLOMYCIN®

DEMETHYLCHLORTETRACYCLINE HCl

Effective in a wide range of everyday infections — respiratory, urinary tract and others — in the young and aged — the acutely or chronically ill—when the offending organisms are tetracycline-sensitive.
Side Effects typical of tetracyclines which may occur: glossitis, stomatitis, proctitis, nausea, diarrhea, vaginitis, dermatitis, overgrowth of nonsusceptible organisms. Also: photodynamic reaction (making avoidance of direct sunlight advisable) and, very rarely, anaphylactoid reaction. Reduce dosage in impaired renal function. The possibility of tooth discoloration during development should be considered in administering any tetracycline in the last trimester of pregnancy, in the neonatal period, and in early childhood. *Capsules*, 150 mg. and 75 mg. of demethylchlortetracycline HCl. *Average Adult Daily Dosage:* 150 mg. q.i.d. or 300 mg. b.i.d. 1. Kunin, C. M.; Dornbush, A. C., and Finland, M.: Distribution and Excretion of Four Tetracycline Analogues in Normal Young Men. *J. Clin. Invest.* 38:1950 (Nov.) 1959.

LEDERLE LABORATORIES • A Division of AMERICAN CYANAMID COMPANY, Pearl River, New York
7517-3

Lederle

THE DERMATOSES THAT WERE STEROID-UNTREATABLE

Salt and water retention, edema, overstimulation o the appetite, excessive weight gain, mood swings- these were some of the problems that used to confro physicians when they wanted to prescribe steroids fo dermatoses. For patients already overweight, or wit edema associated with cardiovascular disease, o those who were tense and anxious, steroid treatmei could aggravate their problems. But with the adve of ARISTOCORT® Triamcinolone, many of thes patients became "steroid-treatable." The reason: N only did *this* steroid provide gratifying symptomat relief, but it did so *without* the penalty of overstim lation of the appetite, excessive weight gain, salt ar water retention, edema, and undesirable euphori And these benefits have been confirmed for oth patients with steroid-susceptible disorders, as well those formerly untreatable.



Side Effects: Since it may, under some circumstances, produce many of the unwanted effects common to all cortisone-like drugs, discrimination should always be exercised in administering ARISTOCORT® Triamcinolone. Any of the Cushingoid effects are possible, as are purpura, G.I. ulceration, increased intracranial pressure and subcapsular cataract. Corticosteroids generally may mask outward signs of bacterial or viral infections. Catabolic effects to watch for include muscle weakness and osteoporosis. Weight loss may occur early in treatment but is usually self-limiting.
Contraindications: While the only absolute contraindications are tuberculosis, herpes simplex and chicken pox, there are some relative contraindications (peptic ulcer, acute glomerulonephritis, myasthenia gravis, osteoporosis, fresh intestinal anastomoses, diverticulitis, thrombophlebitis, psychic disturbance, pregnancy, infection) to weigh against expected benefits.
A single daily dose may provide effective control, is convenient for the patient, and can be employed in both initial and maintenance therapy.

MAXIMUM STEROID BENEFIT—MINIMUM STEROID PENALTY

Aristocort®

Triamcinolone

1 mg., 2 mg., 4 mg. or 16 mg. tablets

LEDERLE LABORATORIES • A Division of AMERICAN CYANAMID COMPANY, Pearl River, New York

Lederle

272-4



RECOGNIZE THIS PATIENT?



When you recognize depression and anxiety traceable to an emotionally charged situation with no somatic disorder

—*start the patient on 'Deprol'*

Typical situations in which 'Deprol' is indicated:

marital or other family problems ■ death of a loved one ■ financial worries ■ fear of cancer, heart disease or other life-threatening illness ■ pre- and post-operative apprehensions ■ retirement problems, and many other stressful situations which cause the patient to feel a sense of loss, guilt or unworthiness

Advantages of 'Deprol'

1. By relieving both depression and anxiety, 'Deprol' lifts the mood of the depressed patient without the agitation and "jitters" that often accompany "energizer" therapy alone.
2. 'Deprol' restores normal sleep, relaxes physical tensions, and improves appetite.
3. 'Deprol' acts rapidly—patients often respond within a week or two.
4. 'Deprol' is relatively nontoxic and free of side effects.
5. When depression and anxiety accompany physical illness, 'Deprol' is compatible with drugs used to treat these organic conditions.

Deprol®

meprobamate 400 mg. + benactyzine hydrochloride 1 mg.

Side effects: Slight drowsiness and, rarely, allergic or idiosyncratic reactions, due to meprobamate, and occasional dizziness or feeling of depersonalization in higher dosage, due to benactyzine, may occur. **Contraindications:** Previous allergic or idiosyncratic reactions to meprobamate contraindicate subsequent use of meprobamate or meprobamate-containing drugs. **Precautions:** Should administration of meprobamate cause drowsiness, the dose should be reduced. Operation of motor vehicles or machinery or other activity requiring alertness should be avoided if these symptoms are present. Effects of excessive alcohol may possibly be increased by meprobamate. Although suicides with 'Deprol' have not been reported, prescribe cautiously and in small quantities to patients with suicidal tendencies. Massive overdosage of meprobamate may produce lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse. Even though it has not been reported with 'Deprol', consider the possibility of dependence, particularly in patients with history of drug or alcohol addiction; withdraw gradually after prolonged use at high dosage. *Complete product information available in the product package, and to physicians on request.*

Usual adult dosage: 1 tablet t.i.d. or q.i.d. May be increased gradually, as needed, to 6 tablets daily. With establishment of relief, may be gradually reduced to maintenance levels. **Supplied:** Light-pink, scored tablets Bottles of 50.

WALLACE LABORATORIES / *Cranbury, N. J.*

CD-793

DOCTOR!

you're on an urgent call ...you get a flat...

DO THIS



The time you save may save a life. Play safe. Keep "Spare Tire" in your car. This is the quality tire inflator and sealer with Dupont Freon. Inflates tire and seals puncture while tire remains on car. Positively safe! No jack or tire changer necessary. No muss, no fuss, no sweat. Saves time, trouble—tempers, too! Order yours now!

NOT THIS





ONLY $1.98 each
Two cans, $3.75
SAVE! Four cans, $7.00

Taft Chemical Corporation
315 W. Lancaster Ave.
Ardmore, Pa.

Enclose check with order and we'll pay the postage!

Gentlemen:
Please send me_____cans of Spare Tire. Amount of check_____or money order_____.

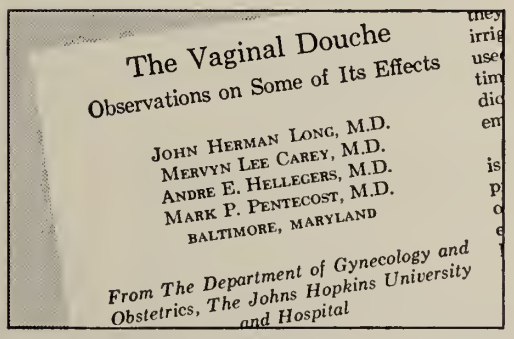
NAME_____ADDRESS_____

CITY_____ZONE____STATE_____

TAFT
CHEMICAL CORP.
315 W. LANCASTER AVE.
ARDMORE, PA.

A Valuable Contribution To Medical Literature

A DEFINITIVE STUDY ON DOUCHING



The Vaginal Douche

Observations on Some of Its Effects

JOHN HERMAN LONG, M.D.
MERVYN LEE CAREY, M.D.
ANDRE E. HELLEGERS, M.D.
MARK P. PENTECOST, M.D.
BALTIMORE, MARYLAND

From The Department of Gynecology and Obstetrics, The Johns Hopkins University and Hospital

A SEARCH OF MEDICAL LITERATURE REVEALS NO COMPARABLE OBJECTIVE EVALUATION OF THE SUBJECT.

The authors state at the outset,

"Each physician has his own idea of the value or harm of the vaginal douche and many have expressed such ideas in writing. Such opinions have been arrived at without any intensive investigation or observation of subjects using douches as compared to those not using them. The purpose of this study is to report our observations on three groups of patients, one taking no douches, a second douching with a medicated solution* and a third douching with plain water."[1]

1. West. J. Surg., Obsts. & Gynec.: *71*:122-127, 1963

*The medicinal powder used in this study was META CINE®, a scientifically formulated preparation containing: papain, lactose, citric acid, methyl salicylate, eucalyptol, menthol and chlorothymol.

OBSERVATIONS BASED ON EXTENSIVE AND THOROUGH EXAMINATION SCHEDULE.

"One hundred patients were selected at random, regardless of their chief complaint, from the general population attending the Out-Patient Gynecology Clinic of The Johns Hopkins Hospital. Those selected were reexamined at 1, 3, 6, 9 and 12 months after the initial visit."

"At intervals patients were switched to the regimen of another group so that comparison of the effect of douching or not douching might be made in the same individual."

Three years were required to complete the study.

An evaluation of the objective findings of the study demonstrates that douching with META CINE® had the following effects on vaginal secretion:

- increased Doderlein organisms,
- proved effective in lowering WBC counts,
- proved effective in increasing glycogen content.

META CINE® was found to be a good antagonist to vaginal discharge and irritation—and also proved effective in reducing cervicitis.

No untoward effects of douching were encountered in the study.

Reprints of the complete study and professional samples of Meta Cine are available on request.

BRAYTEN

BRAYTEN PHARMACEUTICAL COMPANY • *Chattanooga 9, Tennessee*



Doctor, you can take it with you!



THE BURDICK EK-III **DUAL-SPEED ELECTROCARDIOGRAPH**

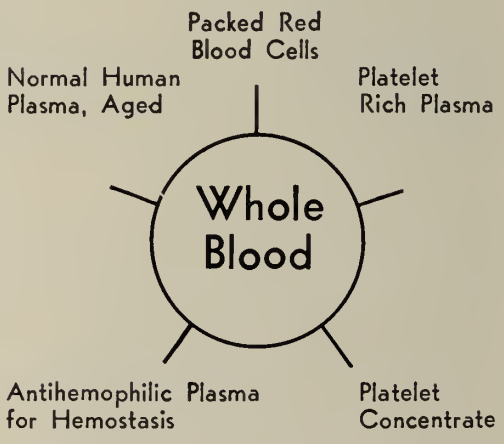
- 26½ pounds light, including all accessories and carrying case! Ideal for office or bedside use
- 25 or 50 mm. speed — an accurate record for an accurate diagnosis
- frequency response greatly in excess of minimum A.M.A. standards
- top-loading paper drive eliminates tedious paper-threading adjustments

Burdick

THE BURDICK CORPORATION
MILTON, WISCONSIN
Branch Offices: New York • Chicago • Atlanta • Las Angeles
Dealers in all principal cities
KAY SURGICAL, INC.
1144 Madison Ave. Memphis, Tenn.

Follow the trend to

BLOOD COMPONENT THERAPY



Best for the patient and More Economical.

All available from

BLOOD BANK FOUNDATION

1921 Broadway ALpine 4-3551
NASHVILLE, TENNESSEE

a cry in the night?

But that low back pain needs attention, too!



Robaxin®
(methocarbamol, Robins)

U.S. Pat. No. 2770649

Average Adult Dose

	ROBAXIN® (methocarbamol, 500 mg./tab.)	ROBAXIN®-750 (methocarbamol, 750 mg./tab.)
Initially	3 tablets q.i.d.	2 tablets q.i.d.
Maintenance	2 tablets q.i.d.	1 tablet q.4 h. or 2 tablets t.i.d.

A. H. ROBINS CO., INC., Richmond 20, Virginia

Successful clinical experience with ROBAXIN (methocarbamol) in thousands of cases of musculoskeletal disorders is reflected by numerous published reports. Side effects (lightheadedness, dizziness, drowsiness, nausea) may occur rarely, but usually disappear on reduced dosage. Hypersensitivity reactions develop infrequently. Contraindicated in hypersensitive patients.


There's nothing
like a vacation*
for relaxing stress-induced
smooth muscle spasm

...nothing, that is, except the sedative-antispasmodic action of

Donnatal®

Robins

Prescribed by more physicians than any other antispasmodic —*well over 5 billion doses!*

In each Tablet, Capsule or 5 cc. Elixir		In each Extentab
0.1037 mg.	hyoscyamine sulfate	0.3111 mg.
0.0194 mg.	atropine sulfate	0.0582 mg.
0.0065 mg.	hyoscine hydrobromide	0.0195 mg.
16.2 mg. (¼ gr.)	phenobarbital	(¾ gr.) 48.6 mg.

(Warning: May be habit forming)

Under the pressure of modern living, with its "small continued anxieties of life,"[6] functional disturbances of secretion, tone and motility of the gastrointestinal tract are extremely common.[6,8] For the relief of symptoms associated with such disturbances—through rest for the patient, rest for the colon[3]—the drugs of greatest value have proved to be the antispasmodics and the sedatives.[3,6,7]

DONNATAL—a dependable, time-tested combination of natural belladonna alkaloids and phenobarbital—has produced excellent results in relieving visceral spasm.

DONNATAL makes peptic ulcer patients "quite comfortable"[8]...relieves epigastric pain and discomfort[2]...gives "marked relief" in spasm and irritation of the g.i. tract[5]...offers "quite high and predictable" efficiency in alterations of motility associated with gas and cramping[1]...in short, has a definite place in the physician's armamentarium because of "convenience of dosage regulation, effectiveness, safety, and economy."[4]

INDICATIONS: DONNATAL is indicated in recurring, persistent or chronic visceral spasm, as in peptic ulcer, pylorospasm, irritable stomach and colon, motion sickness, nocturnal enuresis, mucous colitis and diarrhea.

SIDE EFFECTS: No serious toxic reactions are to be expected. Dryness of the mouth, blurred vision, difficult urination, and flushing and dryness of the skin may occur with excessive and prolonged dosage.

PRECAUTIONS: Patients with incipient glaucoma or urinary bladder neck obstruction must be treated with care, as with any preparation containing a parasympathetic depressant.

CONTRAINDICATIONS: DONNATAL is contraindicated in acute glaucoma, advanced hepatic or renal disease, and known or suspected idiosyncrasy to any of its components.

REFERENCES:

1. Asher, L.M.: Am. J. Digest. Dis. 4:260, 1959.
2. Barden, F.W., Hill, P.S., Mahaney, W.F., and Cuneo, K.J.: J. Maine M.A. 45:11, 1954.
3. Donovan, E.J.: Rocky Mt. M.J. 50:952, 1953.
4. Hock, C.W.: Clinical Med. 8:1932, 1961.
5. Marks, L.: Am. J. Gastroenterol. 27:180, 1957.
6. Palmer, W.L., and Kirsner, J.B.: Therapeutics in Internal Medicine, 2nd ed., F. A. Kyser, ed., Hoeber, New York, 1953, p. 368.
7. Watts, M.S.M., and Wilbur, D.L.: J.A.M.A. 152: 1192, 1953.
8. Wharton, G.K., Balfour, D.C., Jr., and Osmon, K.I.: Postgrad. Med. 21:406, 1957.

A. H. ROBINS COMPANY, INC., RICHMOND 20, VIRGINIA

*This one at Olympic National Park, Washington.

Professional Liability Insurance
(MALPRACTICE)

Policy and Rates Approved
by the
TENNESSEE MEDICAL ASSOCIATION



Standard Coverage That SAVES YOU 35%

Class 1—Physicians doing no surgery

Class 2—Physicians doing minor surgery or assisting in major surgery on own patients

Class 3—Surgeons - General Practitioners who perform major surgery or assist in major surgery on other than their own patients and specialists: Anesthesiologists, Cardiologists (including catheterizations, but not including surgery), Ophthalmologists and Proctologists

Class 4—Surgeons - Specialists

Limits	Class 1	Class 2	Class 3	Class 4
5/15	$ 37.05	$ 46.15	$ 89.05	$133.25
10/30	50.02	62.30	120.22	179.89
25/75	63.36	78.92	152.28	227.86
50/150	70.02	87.22	168.30	251.84
75/225	74.10	92.30	178.10	266.50
100/300	76.32	95.07	183.44	274.50
200/300	79.66	99.22	191.46	286.49
300/300	81.88	101.99	196.80	294.48
200/500	88.77	108.61	202.13	298.49
500/500	93.59	114.61	213.71	315.81
500/1 million	114.70	135.99	236.37	339.81
1 million/1 million	120.25	142.91	249.73	359.79

1. Partnership liability, increase premium for each partner by 20%.
2. X-Ray Therapy and Shock Therapy quotations made on request.
3. Premises Liability (bodily injury, property damage and medical payments) Minimum premium $8.00.

FARRINGER & CO.
Phone 524-7335
Knoxville, Tennessee

FARRINGER & CO.
Phone 276-7331
Memphis, Tennessee

FAW & SHERROD
Phone 926-8164
Johnson City, Tennessee

INGLE-KNOX INSURANCE AGENCY
Phone 265-4541
Chattanooga, Tennessee

LIPSCOMB & PITTS CO.
Phone 272-2515
Memphis, Tennessee

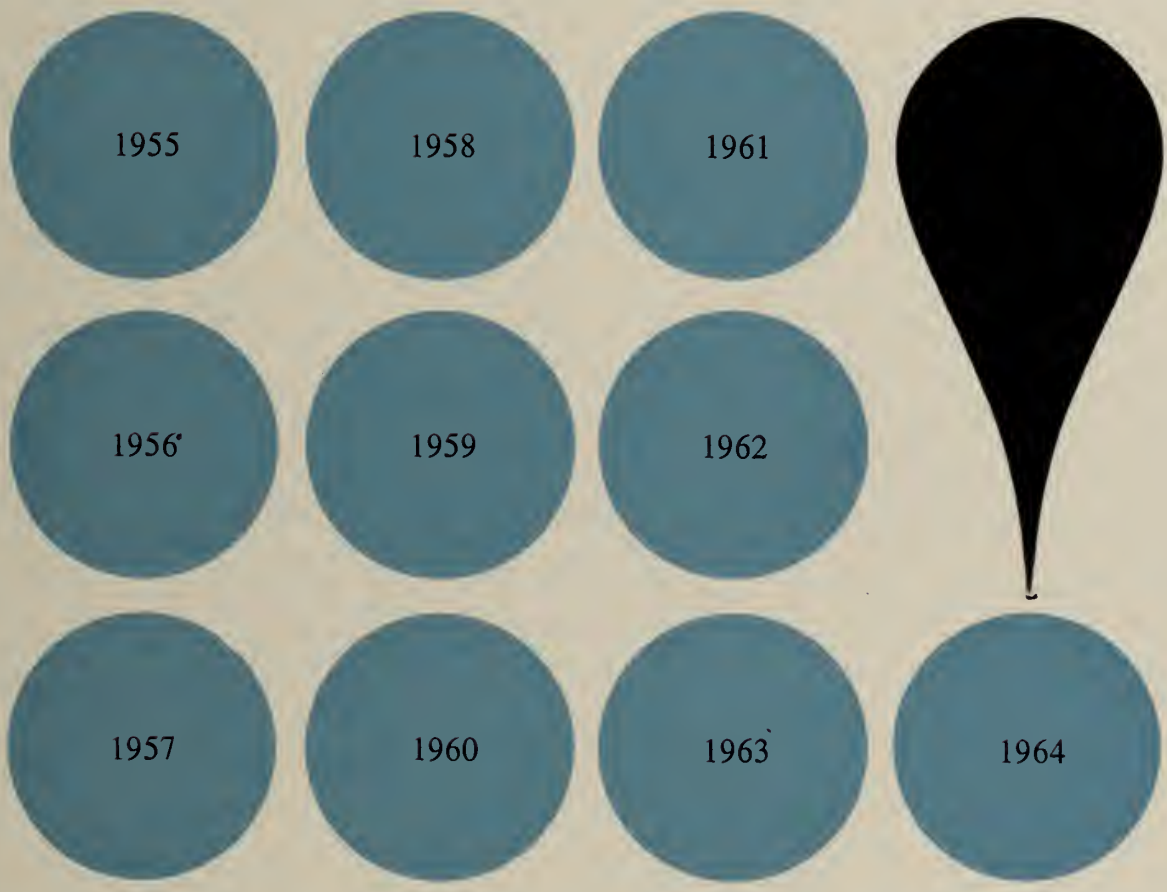
Your policy backed by Assets over $42,000,000.00

Shelby Mutual Insurance Company
of Shelby, Ohio

*20% off on Hospital—Professional Liability

For Information on Hospital-Professional Liability and other coverages, please contact one of the agents listed.

The clear conclusion from 10 years' experience...



belongs in every practice

Miltown®
(meprobamate)

CM-2026

WALLACE LABORATORIES/Cranbury, N. J.


just
turned
hypertensive

a 15 mm. Hg. drop in diastolic pressure would also suit her very well

for suitably gradual, physiologic hypotensive treatment

HYDROMOX®

QUINETHAZONE·TABLETS

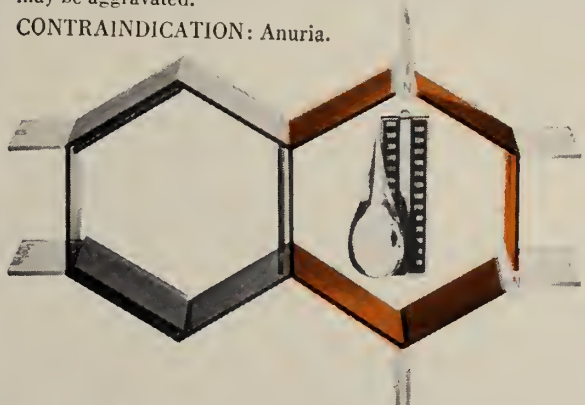
antihypertensive diuretic

HYDROMOX Quinethazone is excellent for use in early hypertension. Extremely well tolerated, the average reported reduction in diastolic pressure is 15 mm. Hg.,[1,2] just right for patients with mild to moderate diastolic elevations. Systolic pressure lowered accordingly. A convenient, single daily dose of one to two 50 mg. tablets is usually sufficient.

INDICATED in hypertension with or without edema, and in all types of edema involving salt retention. May be helpful in some cases of lymphedema, idiopathic edema and edema due to venous obstruction.

SIDE EFFECTS: Skin rash (rare), gastrointestinal disturbances, weakness and dizziness, seldom so severe that drug should be stopped. Generally, the adverse effects sometimes associated with the thiazide diuretics are possible. Pre-existing electrolyte abnormalities may be aggravated.

CONTRAINDICATION: Anuria.



1. Steigmann, F., and Griffin, R.: Evaluation of Quinethazone, a New Diuretic. *J. Amer. Geriat. Soc.* 11:945 (Oct.) 1963.
2. Schwartz, M.: Office Evaluation of a New Diuretic in Patients with Hypertensive Diseases. Scientific Exhibit Presented at the Clinical Meeting of the American Medical Association, Los Angeles, California, Nov. 25-28, 1962.

Lederle

LEDERLE LABORATORIES,
A Division of AMERICAN CYANAMID COMPANY,
Pearl River, New York

6278-4



Ideal Location for M.D. in Morristown, Tennessee, next door to newly expanding multi-million dollar hospital. Office building, with or without equipment for lease—reasonable. Contact Massengill Agency, 201 East First Street, Morristown, Tennessee. Phone 586-6653.

Remember, Doctor—

It's been

Tafel Surgical Supply Co., Inc.

SINCE 1889

for

Drugs, Orthopedic, Surgical

Supplies & Equipment

1203 Church Street

Nashville, Tennessee



Whether you're a teacher correcting exams. A student cramming for them. A housewife cleaning up after the kids. Or a businessman working late at night. Whoever you are, things go better when you pause and refresh with ice-cold Coca-Cola.



Outwardly calm...but what goes on inside?

Appearances on the outside do not necessarily suggest what goes on inside. This is particularly true of the ulcer patient, who may appear jolly and unruffled to his neighbors, but presents to you the classic symptoms: organic and functional disorders of the G.I. tract, associated with anxiety and tension.

Consider, when you see him next, the value of PATHILON® SEQUELS® with Phenobarbital, which provides sustained anticholinergic protection from spasm and pain in the target areas, as well as sustained phenobarbital action against triggering anxiety. The controlled release of the active ingredients in the SEQUELS® formulation means protective medication day and night.

Effective in peptic ulcer, intestinal colic, ileitis, esophageal spasm, spastic colon, alcohol-induced G.I. upsets, gastric hypermotility and anxiety neurosis with G.I. symptoms. Should be used as adjunct to other measures.

Side Effects (due to tridihexethyl chloride): dry mouth, blurring of vision, constipation.

Contraindications: urinary bladder neck obstruction; glaucoma; obstructive congenital anomalies of the gastrointestinal tract; pyloric obstruction; congenital megacolon; and stenosing gastric or duodenal ulcer with significant gastric retention.

Also available, without phenobarbital, as PATHILON® Tridihexethyl chloride SEQUELS® 75 mg.

Pathilon® Sequels® with Phenobarbital Sustained Release Capsules

Each capsule contains: Tridihexethyl chloride, 75 mg., and phenobarbital, 45 mg.

LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, New York

Lederle

313-4





Out-Patient Clinic and Offices

HILL CREST SANITARIUM

Established in 1925

FOR NERVOUS AND MENTAL DISEASES
AND ADDICTION PROBLEMS

James A. Becton, M.D. James K. Ward, M.D.

P. O. Box 2896, Woodlawn Station, Birmingham 6, Ala. Phones WOrth 1-1151



A SURGICAL INSTRUMENT OIL

Scientifically Developed for the

MEDICAL PROFESSION

Apply as indicated; a few drops especially in locks and serrations of instruments, or other delicate mechanisms. Leave a thin film over the entire instrument to prevent rust in disuse or storage. This highly refined clear instrument oil will not clog, gum or turn rancid. Non-corrosive.

4-oz. can 75c
Pt. bottle with dispensing can $2.50
Qt. bottle with dispensing can $4.00

Plus post.

White Surgical Supply Co.

SURGICAL SUPPLIES & ACCESSORIES

515 West Church Ave. Knoxville 7, Tennessee

Telephone 3-1186

Gyne-Cytology Laboratory, Inc.

M. Wm. Rubenstein, M.D.

(PAPANICOLAOU METHOD)

RAPID SERVICE
Mailing Kits On Request

Suite 422 - 636 Church Street
EVANSTON, ILLINOIS 60201

ACCEPTED AMERICAN MEDICAL ASSN

HOMOGENIZED
VITAMIN D MILK
PRODUCES SOFT CURD

(400 U.S.P. Units Vitamin D Per Quart)

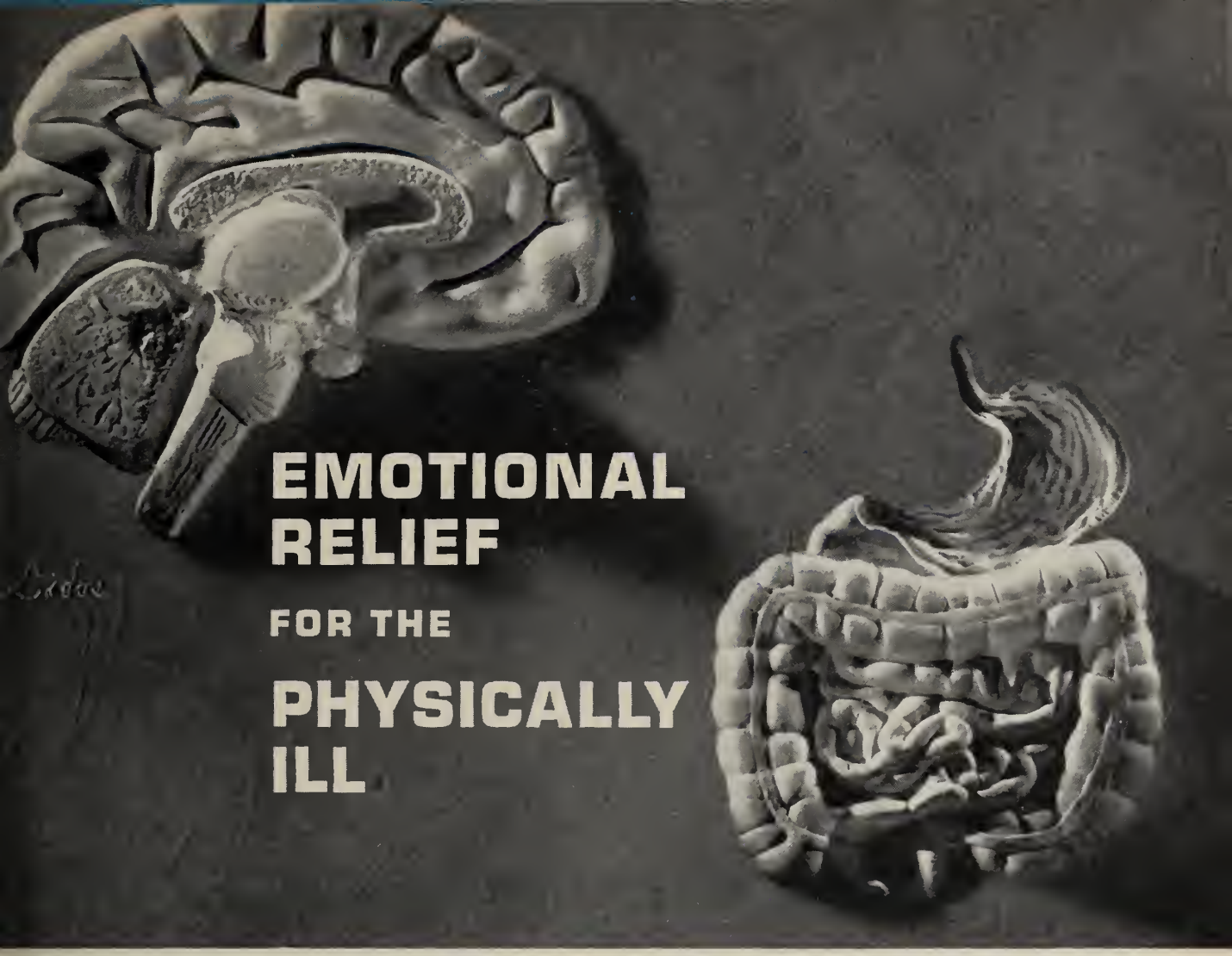
"A" Grade

Sealtest MILK

Phone AL 5-6451

Fortified Fat Free Milk
(2000 Units Vitamin A—400 Units Vitamin D)

NASHVILLE PURE MILK CO.



RELIEVES ANXIETY, APPREHENSION AND TENSION...



All day long

. . . keeps the patient calm, and the mind clear.



All night too

. . . aids restful sleep, with no barbiturate hangover.

MEPROSPAN®-400

(MEPROBAMATE 400 MG. SUSTAINED RELEASE)

Simplified, convenient dosage for emotional relief.

Side effects: 'Meprospan' (meprobamate, sustained release) is remarkably free of untoward reactions. Daytime drowsiness has not been reported. Rare allergic or idiosyncratic reactions may occur, generally developing after 1-4 doses of the drug.

Contraindications: Previous allergic or idiosyncratic reactions to meprobamate contraindicate subsequent use.

Precautions: Should administration of meprobamate cause drowsiness or visual disturbances, the dose should be reduced. Operation of motor vehicles or machinery or other activity requiring alertness should be avoided if these symptoms are present. Effects of excessive alcohol may possibly be increased by meprobamate. Prescribe cautiously and in small quantities to patients with suicidal tendencies. Massive overdosage may produce lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction; withdraw gradually after prolonged use at high dosage.

Complete product information available in the product package, and to physicians upon request.

Usual adult dosage: One 400 mg. capsule or two 200 mg. capsules at breakfast; repeat with evening meal.

Supplied: 'Meprospan'-400 (meprobamate 400 mg.), 'Meprospan'-200 (meprobamate 200 mg.), each in sustained-release capsules. Both potencies in bottles of 30.

CME-805

WALLACE LABORATORIES *Cranbury, N. J.*



Putting the cap on a bottle sounds simple. Just make it tight enough to keep the contents in, prevent leakage, and protect the product; loose enough to be opened with ease. However, that isn't quite as simple as it sounds. ■ At Eli Lilly and Company, there are exact-tightness specifications for the cap of every bottle. Capping machines are carefully adjusted to apply just the right amount of torque (or twist) to tighten the caps. Then the tightness of the caps is double-checked . . . just to be sure. ■ That's where the torque tester comes in. At least once every fifteen minutes, five bottles are tested as they come out of the capping machine. They are placed on the torque tester, and the twist on the caps is measured . . . just one more of the many controls that add immeasurably to the quality of the finished product.

Eli Lilly and Company • Indianapolis 6, Indiana, U.S.A.

Lilly

400654

Journal of the Tennessee Medical Association

OWNED AND PUBLISHED BY THE ASSOCIATION

Volume 57 JUNE, 1964 No. 6

Identification*

BLAND W. CANNON, M.D., Memphis, Tenn.

No doubt most of you are opinionated regarding methods and types of identification, as well as the specific meaning implied by this term. This evening I wish to share with you some personal thoughts on this subject when applied to physicians. Emphasis will be placed on the identification of the physician with his profession and on the patient's identification of the physician.

Some years ago a physician was asked to appear before a Sunday School Class of four-year-olds. The purpose was to identify the various professions referred to in their lessons. The physician assumed that for this age group he should wear a white coat and carry a stethoscope and a handful of tongue blades to assure his prompt identification. No sooner was his entrance noted than the success of his character display was realized, with many members of his audience whimpering and then breaking forth with fearful crying. The wave of emotional change spread rapidly until a bedlam resulted.

The peaceful hour planned by well-meaning teachers had left much to be desired. The emotional response of the children in their very real identification of the physician was certainly disturbing, but understandable and easily analysed. The response was a conditioned reflex,—the children had visited the office of a physician, only infrequently and the usual experience was related to innoculations or injections.

The purpose of relating this Sunday School incident is to illustrate that this type of identification, although real, is invalid, for the doctor is quite the opposite of a dispenser of pain and discomfort.

Let us now proceed with the discussion of identifications that are real and also valid, dividing the subject matter into two categories. The first type is a centrifugal identification and pertains to orientation of the self in regard to a group, with a resulting feeling that one belongs, is a part of, and bears the distinguishing characteristic of the profession. For illustration, many of you have sons who, during their high school years, strive to obtain the identification of a football player on the high school team. I am one of you, for in our household there is a young man of seventeen who lifts weights, "eats like a horse," weighs twice a day, wears his letter jacket on all occasions excluding church, passes the football indoors as well as out, and whose conversation is limited to football personalities and statistics. The young graduate in medicine, or a physician beginning his practice, assumes only a slightly more restrained attitude than that of our football player. He strives to gain the professional status that properly identifies him as a physician among his colleagues in medicine, as well as before all mankind. Of course, this identification is both real and valid, for his desire of identification with a group is fulfilled.

As the young physician invests himself with the cloak and colors of the medical profession, he may seek to gain a more specific orientation within this group. He may specialize, and join and participate in organizations bound by a common interest and purpose. It is this type of identification that I, with you, have strived to attain in the Tennessee Medical Association and in the American Medical Association. We are justly proud of the bright hues of our cloak of identification. While our adversaries or opponents have labeled us as a negativistic, lobbying trust, we smile in confidence knowing that our course has been one of giving our best to both the individual in

*Address read at the President's Banquet, the Annual Meeting of the Tennessee Medical Association, April 14, 1964, Memphis, Tenn.

need of healing and to a nation desirous of a high standard of health. From our efforts the highest type of medical education has been fostered. We have unmasked and fought quackery. We have exposed substandard medical practices. We have felt that the health of the people of our nation is a continuing responsibility and that any program or programs jeopardizing this responsibility must be attacked.

Energetically we seek and will continue to seek self-identification with a profession dedicated to the purpose of maintaining the highest standards of medical practice. This centrifugal identification comes easily, satisfying our interests and desires, as physicians. There is little or no danger that it will be changed or lost in the future.

This secure position is not enjoyed by the second type, however. We designate this type as centripetal identification, or an identification in which the physician is the recipient through his performance.

The active moving force is from the patient to his physician. It is an identification gained only through a doctor-patient relationship. In the past, identification of the physician by his patient has fostered the respect and love we have enjoyed since the Art of Healing had its inception. We may question the status today, however, of the patient's identification of the physician, because of the change toward institutional, hospital, and large group practice. We have some concern as to whether the emphasis on the scientific aspect of medicine has narrowed our perception of the patient and his needs.

Werner Schneider, a young Nazi soldier, was admitted one night to the 98th General Hospital with a nasty gunshot wound of the head. The War had just ended, Schneider was in a detention camp. As was not unusual, Schneider was slipping under the fence that night to visit his wife when he was felled by the shot of a Polish guard. The right half of his cranium was destroyed. Repeated surgical procedures and finally cranial plating aided in the restoration of a normal configuration to the head. The nearly complete paralysis of his left side remained. Although he was a recent enemy in our camp, we all sensed his deep appreciation of the care and kindness shown him. In the ensuing eighteen years I have not seen this Nazi soldier, but periodically his letters arrive. He writes of his personal success, his mental accomplishments and his physical prowess. On one occasion he was honored for a successful mountain climb in Southern Germany. His messages clearly reflect the identification resulting from our efforts of nineteen years ago. It is as though we stepped over the threshold into the inner circle of his being.

All of you, as physicians, have had many, many similar experiences. Quite frequently it occurs without your realization and in patients where your scientific knowledge and skill could not effect relief or cure. Yet, the patient has grasped, and is proud to proclaim, an identification which we in the profession are singularly privileged in obtaining. The quality of embracing a broad prospective in the diagnosis, treatment and understanding of the patient has been the underlying premise in this doctor-patient relationship.

The trend in medical practice has been toward clear, objective analysis, supported by voluminous laboratory testing. Several explanations are readily available for this trend. Some of these are: (1) The paucity of time the physician has for each patient. (2) An atmosphere in our training which stresses scientific analysis. No doubt, this has been a necessity because of the broadening scope of medical knowledge. (3) A change in attitude of an increasing number of patients, bringing about undue stress on the physician. These patients come to the physician for purposes other than getting well. All of you are aware that usually they are related to problems of compensation or litigation. This fact alone has conditioned and enhanced an ugly weed of distrust as we subjectively consider the patient's difficulties. (4) Neglect in developing the desirable philosophy early in medical practice may relate again to methodology in the training for the profession. (5) Restricting our interest to objective analysis is far easier, especially on patients who stir within us some feeling of repulsion, either by their physical appearance or their mental attitude. The routine of such an evaluation becomes stereotyped approaching an assembly-line medicine. Some

other factors may relate to the suppression of humility or the rise of egotism. We recognize this undesirable trait when the thought creeps into the professional cerebrum that if you can't make a diagnosis, the patient must be a "crock."

All of these likely reasons for the trend in objective-analysis are brought to your attention because they lend themselves to correction. Perhaps some reorientation toward the empathic approach in utilizing our technical and scientific advances is all that is indicated. Objective evaluation employing our scientific knowledge is not to be minimized in its equally important role. Our accomplishments in medicine could not have progressed to such an elevated status on empirical knowledge alone.

Let us think for a moment of the meaning of subjective consideration in evaluation of the patient. Perhaps we can attest to its importance by a comparison in the analysis of sound. The physicist or scientist can describe sound very objectively as an undulation of waves of varying frequency and amplitude. This is, of course, an objective analysis without its subjective qualities. Now add to this the subjective qualities which in essence give sound a true value or meaning. Think for a moment of rain on the roof, thunder, wind through trees, beautiful music. All are sensory sound perceptions which we must consider subjective. But these are only the beginning in the great sphere of subjectivity. Think of the overtones of joy, pleasure, grief, regret and many other valuable responses contained within the subjective sphere of sound —sound, which by objective analysis is simply undulating waves of varying frequency and amplitude. This illustration should alert and redirect our attention once again to the analysis and evaluation of the subjective when assuming the responsibility of a patient's care. Are we willing to believe that with the advances of scientific knowledge we can now minimize the value of the subjective?

The subjective evaluation still constitutes the principal method a physician has in tackling the uncertainties in medicine. The uncertainties, which are by far in the majority now, can never disappear.

If we are to maintain the identification of a true physician in the fulfillment of the patient's needs, we must go beyond the certainties in medicine, beyond the study of the objective, beyond the laboratory test, beyond stereotyped patterns of using needles, stethoscopes and reflex hammers. A distorted purpose in medical practice or a restrictive exposure to the scientific in training, imposes heavy burdens on the already uphill course to the fuller, broader perception of the patient.

We have discussed the reasons for the selective perception of the physician and the methods of correction. Let us consider briefly trends in medicine which may not be deterred by the reorientation of the physician alone.

Some sociologists may think that impersonal medical care is ideal. Such a state would be fostered by those who wish to wipe the slate of this centripetal patient-doctor identification, which we in medicine have held so important. Others desire the interposition of a third party or a socialistic state, where a bureaucy administers the medical care. This hypothesis has as its basis the conditioning of people to accept an impersonal attitude toward their health as for their automobiles.

Perhaps I am too naive to accept the probability that the patient of the future will be conditioned to consider himself a 'conscious machine.' As a machine, though a conscious one, he will be willing to take his body to any group or repair shop as he now does his automobile. There will be no personal or conscious attachment or concern for the mechanic-physician running the routine tune-up test and repairing defective parts.

Although there is a trend in the direction of impersonal medicine, we are reassured by the patient's response to the question, "Who is your doctor?". Rarely heard is the disturbing answer, "University Hospital," or "I was operated on by Clinic Group 109." Such an answer would be suggestive of a disturbing change in the usual patient-doctor reference. Yet the red flag is flying and we must heed the warning, for loss of personal identification between patient and physician is a distinct possibility. Additional effort is required of all physicians in protecting the desired centripetal identifi-

cation with their patients. Especially is this true of physicians practicing in association with institutions, where subjective evaluation of, and interest in each patient may be submerged into obscurity in the drive toward growth and recognition.

Many, many years ago a very wise physician gave us a great and lasting Oath. To that Oath an addendum may now be apropos, so I say this to you. Let us now reaffirm our identity in fulfilling the qualities of the true physician. Let us have the dedication and determination of our football player. Let us use our scientific knowledge with wisdom. Let us broaden our perspective and reaffirm our interest in the subjective aspects of our patients. Let us demonstrate our faith in the dignity of man as we take our seat at the bedside of a brother in distress. Let us create a lingering mood of empathy and confidence that the patient perceives in the present, that he knows existed in the past and comes to expect in the future.

Pulmonary Embolism in the Aged. Unusual Clinical Features. Gerber, Isadore E.: Geriatrics 19: 3, 1964.

Individuals over age 50 comprise about two-thirds of all cases of embolic disease. About 75% of the pulmonary embolic manifestations in aged persons are found in association with diseases of the central nervous system and heart.

The diagnosis is often difficult since many patients present an atypical clinical course. An awareness of the fact that aged persons are more likely to present atypical features will help to reduce error in diagnosis.

The typical clinical manifestations of pulmonary embolism are well known to the physician. This report is directed at less well-known features, such as the absence of phlebothrombosis, acute cardiovascular episodes, unexplained prolonged shock, pulmonary infarctions simulating neoplasms and pneumonitis, and symptoms of central nervous system disease following cerebrovascular thrombosis or embolism which may be confused with those resulting from pulmonary emboli.

In a study of 22 fatal cases of pulmonary embolism in hemiplegic patients, 17 were 60 years of age or over. The paralyzed extremity was the source of the embolus in every instance and in not a single patient had the clinician suspected an embolus.

Of all conditions which can be confused with pulmonary embolus, heart disease is the most common. The confusing clinical picture in which a differential diagnosis between pulmonary embolus and myocardial infarction is difficult if not impossible. The similarity of symptoms in these two conditions is certain to lead to error in diagnosis.

Prolonged shock is often considered to be everything else but due to pulmonary embolism, but there are certainly notable exceptions and one should be alert to the possibility of occlusion of the pulmonary artery.

Pulmonary emboli will give rise to diminished cardiac output which may produce cerebrovascular insufficiency with resulting symptomatology. Prolonged coma, syncopal episodes, precipitation of acute brain syndrome, and aggravation of a chronic brain syndrome have been found.

More familiarity with the unusual varieties of symptoms and the suspicion of possibility of developing pulmonary embolus in every ill person will help in the reducing of diognostic errors. (Abstracted for the Middle Tennessee Heart Association, by William F. Sheridan, Jr., M.D., Nashville.)

Abstract of the Proceedings of the House of Delegates of the Tennessee Medical Association Memphis—April 12-15, 1964

The House of Delegates of the Tennessee Medical Association, meeting at the Peabody Hotel, Memphis, Tennessee, April 12 and 14, 1964 in conjunction with the 129th Annual Meeting of the Association, convened at 1:00 P.M. with Dr. J. Malcolm Aste, Speaker of the House, presiding.

The invocation was rendered by Dr. John H. Burkhart, Knoxville, Secretary of the Association.

DR. JOHN H. BURKHART: Almighty God our Father, Thou who did'st create man in Thine image and set him upon this earth to praise and to glorify Thee, we do praise and Glorify Thee this day and seek Thy blessing. May the business of this Association be Thy business, and may the work of its members by Thy work. Keep us always aware, our Father, of the nobility of the work to which we are called, a nobility made more manifest by the Supreme Physician, our Lord Jesus, and defined so clearly by His dictum that he who would be greatest among men must first be servant of all. As reports, resolutions, and debate wax and wane in our business sessions, as new ideas and new methods are introduced and older more established ones remembered in our scientific discussions, and as social fellowship and fun are interspersed for variety and pleasure, may all of these elements of this annual assembly of the physicians of this great state have Thine approbation and blessing. Amen."

Dr. Carl E. Adams, Murfreesboro, Chairman of the Credentials Committee, reported a quorum of registered delegates present.

1963 Minutes Approved

The speaker announced that the Minutes of the last regular session were reproduced in the June, 1963, issue of the JOURNAL of TMA and he requested that a motion be presented to approve the proceedings as published. It was moved and duly seconded that the Minutes of the 1963 regular session be approved as published in the June, 1963, issue of the JOURNAL. **The motion was put to a vote and adopted.**

Reference Committees

The Speaker announced the personnel of the following Reference Committees:

Committee on Credentials

Carl E. Adams, Chairman, Murfreesboro
Louis A. Killeffer, Harriman
Kenneth G. Ross, Paris

Committee on Amendments to the Constitution and By-Laws

John H. Burkhart, Chairman, Knoxville
Chas. C. Trabue, Nashville
Robert P. McBurney, Memphis

Committee on Resolutions

A. Roy Tyrer, Chairman, Memphis
John M. Higgason, Chattanooga
W. O. Vaughan, Nashville

Committee on Reports of Officers

Lamb B. Myhr, Chairman, Jackson
Ben D. Hall, Johnson City
John L. Farringer, Jr., Nashville

Committee on Reports of Standing Committees

David R. Pickens, Chairman, Nashville
Ellis U. Harr, Bristol
B. G. Mitchell, Memphis

Committee on Reports of Special Committees

Robert H. Haralson, Chairman, Maryville
John H. Beveridge, Nashville
Laurence W. Jones, Union City

Committee on Outstanding Physician of the Year

Harmon L. Monroe, Chairman, Erwin
W. O. Vaughan, Nashville
Wm. J. Sheridan, Chattanooga

Nominating Committee

The Speaker announced that the Board of Trustees had complied with the By-Laws by appointing a Nominating Committee with representatives from each of the three grand divisions of the state, with no two members

from the same county medical society. The Speaker announced the personnel of the committee as follows:

East Tennessee:

Harmon L. Monroe, Erwin
Richard C. Sexton, Jr., Knoxville
Wm. J. Sheridan, Chattanooga

Middle Tennessee:

James C. Gardner, Nashville
Chas. A. Trahern, Clarksville
James W. Wilkes, Jr., Columbia

West Tennessee:

Charles N. Hickman, Bells
Harold B. Boyd, Memphis
Laurence W. Jones, Union City

Announcements

The Speaker called attention to the kits which had been furnished to all delegates containing the prepared amendments, resolutions, and reports of officers and committees. He requested that presentations to the House be brief and concise and urged members to appear before the Reference Committees on the following day to debate the various issues presented.

Introduction of Amendments

The Speaker called for the introduction of any proposed amendments to the Constitution and By-Laws. There were no amendments introduced to the Constitution. Two amendments to the By-Laws were read and referred to the Reference Committee on Amendments to the Constitution and By-Laws. **(See minutes of the second session of the House of Delegates for text of each amendment and actions thereon.)**

Introduction of Resolutions

Delegates were requested not to discuss or debate resolutions at the time of introduction, but read them only in order for the Speaker to place the resolutions before the Reference Committee. The Speaker pointed out that persons interested in resolutions should appear before the Reference Committee to express their views, and an opportunity would be given in the second session for debate and discussion when the resolutions were reported to the House by the Committee. **(See minutes of the second session of the House of Delegates for text of each resolution and actions thereon.)**

RESOLUTION NO. 1
Incorporation of Tennessee Medical Association

RESOLUTION NO. 2
Tuberculosis Eradication Program of the Tennessee Department of Public Welfare

RESOLUTION NO. 3
Crippled Children's Service Program in Tennessee

RESOLUTION NO. 4
(Withdrawn)

RESOLUTION NO. 5
Recommendations for Expansion of the Medical Aid for the Aged Program

RESOLUTION NO. 6
(Withdrawn)

RESOLUTION NO. 7
Regulation of Medical Laboratories

RESOLUTION NO. 8
Regulation of Blook Banks

RESOLUTION NO. 9
Regulations Regarding Training and Education of Medical Technicians and Laboratory Assistants

RESOLUTION NO. 10
Amendment to the Medical Practice Act

RESOLUTION NO. 11
Implementation of Resolution 68 Passed By the American Medical Association House of Delegates, June 19, 1963

RESOLUTION NO. 12
Extern-Intern-and Resident Affairs of the Hospital Committee of the Memphis-Shelby County Medical Society

RESOLUTION NO. 13
Relationship Between Anesthesiologists and Certain Insurance Carriers

RESOLUTION NO. 14
Authentication of Hospital Records

RESOLUTION NO. 15
Independent Medicine's Political Action Committee—Tennessee

RESOLUTION NO. 16
Educational Program of the Medical Assistants Society of Tennessee

RESOLUTION NO. 17
Nominees to Fill Vacancies on Medical Section of Board of Directors of Tennessee Hospital Service Association

RESOLUTION NO. 18
Implementation of Kerr-Mills Program
RESOLUTION NO. 19
Implementation of Kerr-Mills Program
RESOLUTION NO. 20
(Not Introduced)
RESOLUTION NO. 21
Introduction of Resolutions to TMA

REPORTS OF OFFICERS

Report of the President

BLAND W. CANNON, M.D.

The report of the President outlined the many fields of endeavor and accomplishments during the year and stressed the importance of participation and cooperation on the part of all physicians in meeting the problems confronting the free enterprise system of medicine.

Dr. Cannon expressed concern over the disturbing limitations to the effective transmission of information between the TMA and county societies, from individuals to individuals, from committees to committees. "Medical communication is of vital importance to the medical profession and to each individual physician, for without it there is faulty understanding either between physicians, or between the physician and laymen. It is imperative that we, as physicians, continue to communicate in every possible way with the lay public and with public officials on the county, state and national levels, conveying to them the reasons for the maintenance and protection of the free enterprise system."

Of all efforts expended, the most strenuous were directly aimed at two specific targets (1) opposition to the Administration's proposed compulsory health plan for social security recipients of 65 years of age and over; and (2) the establishment of the effective influence in the state government. Dr. Cannon reported excellent liaison with the Governor and the present State Administration and outlined expansions in the Kerr-Mills program resulting in broader health care for the aged citizens of Tennessee.

The report called for a collective effort on the part of physicians, hospitals and communities in meeting the problem of rising health care costs. In this area of concern, steps had been taken to explore ways and means of determining over or under utilization of hospitals and medical services.

The purposes of IMPACT (Independent Medicine's Political Action Committee—Tennessee) and AMPAC (American Medical Political Action Committee) were outlined and Dr. Cannon pointed out that these were available mechanisms through which the medical profession could participate in an effective, coordinated state and nationwide program aimed at defeating the advocates of medical socialism and replacing them with men who subscribe to the proud principles of constitutional government.

The President commended the committees and individuals who were responsible for producing two important conferences in 1963—The Congress on Mental Illness and Health, and The Rural Health Conference. The progressive program of the Woman's Auxiliary was recognized and Dr. Cannon expressed gratitude for their assistance throughout the year. Proper recognition was also made and due credit given to the extreme competence of the Board of Trustees and Officers; to the many Committees who capably served; and to those physicians called upon for service who responded with tireless and diligent devotion to the tasks presented.

Report of the Secretary

JOHN H. BURKHART, M.D.

"The office of Secretary is a Constitutional office and the duties of this office are those commonly associated with the office of secretary in other organizations. As a member of the Board of Trustees the Secretary has met with the Board in its regular meetings and has served on Board of Trustees committees. Further than this, however, a report of the Secretary concerning statistical information regarding Tennessee Medical Association would be redundant since this information is included in the report of the Executive Director."

Report of Board of Trustees

ROBERT M. FINKS, M.D.

In keeping with policy, four regular meetings were conducted by the Board of Trustees during the year in the months of April,

July, October and January. Special meetings and conferences of the Executive Committee were held to determine matters requiring immediate action.

Since many significant matters were considered in these meetings, the report offered an outline of the major actions taken by the Board under four broad headings: Education, Health Legislation, Economic Problems, and Administration.

Education: (1) Approved scope of program and allocated funds for presentation of the First Congress on Mental Health in Tennessee. (2) Encouraged and coordinated mass immunization programs utilizing Sabin Oral Vaccine on a statewide basis. (3) Urged county medical societies to establish effective utilization committees. (4) Approved change in format of general scientific meeting wherein general sessions were discontinued and the scientific presentations of specialty societies were utilized by all TMA members. (5) Studied and considered joint participation in the Health Careers Program sponsored by the Tennessee Hospital Association.

Health Legislation: (1) Constantly worked with Commissioners in the State Government and other State Officials in accomplishing major expansions in the Medical Assistance to the Aged Program in Tennessee. (2) Considered and approved testimony in opposition to the King-Anderson Bill which was filed with the Ways and Means Committee of the House of Representatives. (3) Studied testimony re Tennessee Legislative Council hearings on laboratories and blood banks and appointed a special ad hoc committee to study the matter. (4) Appointed representatives to study programs under the Department of Public Welfare. (5) Heard reports and considered a number of important issues on state and national legislative matters. (6) Approved intervention in a lawsuit relating to the Optical Dispensing Act. (7) Discussed and referred to the Council a report of violations by some physicians of the State Adoption Laws.

Economic Problems: (1) Directed the Committee on Insurance to study means of providing low-cost investment programs for TMA members. (2) Approved continuation of the contract with the Department of Defense for medical care of dependents of persons on active duty in the Armed Forces. Obtained approval from the Defense Department to publish the fee schedule for distribution to TMA members.

Administration: (1) Directed projects of the Board's Long-Range Planning Committee. (2) Appointed all standing and special committees, a nominating committee, and the Board of Directors of Independent Medicine's Political Action Committee. (3) Developed a new "Seal" for TMA. (4) Provided funds to present the first Tennessee Rural Health Conference in cooperation with the Farm Bureau and the University of Tennessee Extension Service. (5) Studied and recommended incorporation of the Tennessee Medical Association. (6) Carefully scrutinized and approved all financial reports and expenditures.

The Board of Trustees diligently served in administrative and policy matters relating to the Association in one of its busiest years and the Chairman commended the members for untiring service in effectively and efficiently handling the affairs of TMA.

Report of Treasurer

The Treasurer's report contained the official audit conducted at the close of December, 1963 by Grannis and Associates, CPAs of Nashville.

Income from JOURNAL advertising has continued to decrease and it was reported that it is not now sufficient to cover the cost of the publication of the JOURNAL. The remainder is financed through the general budget.

The Association operated well within its budget adopted for 1963 with an average reserve at the close of the year. The following is a condensed statement of cash receipts and disbursements for the calendar year 1963, and a balance sheet of the financial condition of the Association.

TENNESSEE MEDICAL ASSOCIATION
Nashville, Tennessee
BALANCE SHEET—DECEMBER 31, 1963

ASSETS:	
Bank Balance	$ 65,487.60
Interest Receivable	1,180.87
Total Current Assets	$ 66,668.47

INVESTMENTS:	
First Mortgage Notes	$ 73,837.94
Federal Farm Loan Bond	8,000.00
Savings	127,897.06
Total Investments	$209,735.00
FIXED ASSETS:	
Land and Building	$ 76,452.72
Equipment	19,757.51
	$ 96,210.23
Less Accumulated Depreciation	20,314.13
Total Fixed Assets	$ 75,896.10
CURRENT LIABILITIES	$ 874.12

STATEMENT OF CASH RECEIPTS AND DISBURSEMENTS

(Consolidated Financial Statement—January 1-December 31, 1963)

RECEIPTS	
AMA Fees for Dues Collection	$ 1,178.84
Annual Meeting Exhibits & Other Income	8,632.50
TMA Dues	109,625.00
Journal Advertising	27,238.33
Income from First Mortgage Investments	3,469.79
Building Income	2,400.00
AMA Dues Collected	117,012.50
Payroll Taxes Collected	9,426.04
Miscellaneous Income	495.43
TOTAL RECEIPTS	$279,478.43
DISBURSEMENTS	
AMA Delegates Expense	$ 3,315.30
Annual Meeting Expense	11,741.55
Auditing and Legal Fees	3,000.00
Board of Trustees	950.52
Committee Expense	3,346.04
TMA Council	599.85
Headquarters Building Expense	2,510.67
Health Project Contest	1,207.60
Employees Insurance Plan	2,282.65
Journal Publication Expense	33,458.24
Legislative Expense	3,529.72
Office Equipment Purchased	1,591.94
Postage	1,420.80
Printing	2,904.93
Office Supplies & Machine Maintenance	2,672.81
President's Expense	1,886.91
Staff Salaries (Seven Persons)	39,349.06
Payroll Taxes & Social Security	10,606.26
Telephone and Telegraph	2,646.89
Staff Travel Expense	4,684.48
State & County Officers Conference	850.48
Rural Health Conference	328.16
Mental Health Conference	2,000.00
AMA Dues Remitted	117,035.00
Transferred to Savings Account	8,000.00
Miscellaneous Expense	1,776.85
TOTAL DISBURSEMENTS	$263,696.71

Report of the Council

FRANCIS H. COLE, M.D., Chairman

The Chairman reported two major problems confronting the Council at the present time. (1) An effort on the part of osteopathic physicians to achieve hospital staff appointments and hospital practice privileges. This matter is being considered by the Council and a recommendation will be made when sufficient information is obtained. (2) Contractual relations between physicians and hospitals continues to be an area of activity of the Council. The report stated that though significant improvements had been made, problems yet remained unsolved and the Council would proceed with deliberate circumspection in a matter of such far-reaching implications for the future course of all branches of medicine, on a state and national level. The Council met with representatives of the Tennessee Societies of Radiology, Pathology and Anesthesiology on two occasions, and on one occasion with the Executive Committee of the Tennessee Hospital Association in an effort to reach a workable solution to the matter.

The Tennessee Hospital Association is in the process of developing a system of uniform accounting which will allocate hospital charges to the areas in which the cost is incurred, and the report of the Council requested the House of Delegates to instruct the Health Insurance Committee, the Committee on Hospitals and TMA representatives to the Consultative Committee of Purveyors, Providers, and Payers of Health Care to immediately institute measures to seek changes in health insurance policies to provide radiology and pathology under professional care rather than under hospital services.

Other questionable individual matters had been presented to the Council however these were handled by district councilors on the local level, usually through the local medical society.

Report of the Executive Director

J. E. BALLENTINE

The report of the Executive Director outlined the services to the profession and to the public, and the implementation of pol-

icies and programs of the Association, representing the principal functions of the headquarters staff of TMA. The report offered for quick review the most important facets of the Association's operation. It outlined the services of the staff in assisting in coordinating of the programs and affairs of the Association. Liaison with county medical societies was outlined as well as that with the American Medical Association. The Executive Director reported that he continues to serve on the Advisory Committee on Communications and Public Relations to the American Medical Association.

The activities showed continued growth, progress, and service to members of the Association. The report was divided into fifteen major headings as follows:

(Communication and Education)

The problem of communicating with members of TMA is always one of the major problems. Transmission of information between the state association, county societies, specialty societies, and individual physicians is undertaken. Presented with the report was a newly developed brochure entitled, "What is TMA?". The brochure is an instrument intended to convey to physician members of TMA the aims, purposes, and actions of the Association; to serve as a tool to endoctrinate younger physicians as well as to more clearly convey to related medical and other special organizations, and the public, what the Tennessee Medical Association is, its aims and purposes.

(Annual Meeting Format)

The report outlined the format of the scientific presentations at the annual meeting wherein such scientific programs are now presented for all physicians by the specialty societies that meet concurrently with TMA during its annual meeting. Seventeen such specialty groups presented scientific programs during the 129th annual meeting in Memphis.

(Administration)

In this section the report related activities in the field of public service, economics, insurance, business administration, hospital problems, corporate practice, and others. Services to the profession and the public as well as implementation of policies and programs of the Tennessee Medical Association were outlined. Activities of the TMA staff relating to implementation of policies and programs, administration and field service, publications, exhibits, and promotions were presented. The assisting, maintaining and developing of closer liaison with TMA's forty-nine county medical societies together with coordinating the field services activities in working closely with the councilors, was presented.

(The Legislative Challenge)

The report included a complete description of the legislative activities on a state and national level. Complete details of steps taken by the Association in implementing the Kerr-Mills Medical Assistance to the Aged Program in Tennessee was presented.

On the national level, effective testimony in opposition to H.R. 3920 (King-Anderson Bill) was filed for the record with the House Ways and Means Committee. TMA's complete testimony was printed in the December issue of the JOURNAL. National legislation of medical significance in other areas received proper attention.

On the state level, the Association has been in the planning stages of its forthcoming work in the Tennessee General Assembly in 1965. TMA witnesses have appeared before the Legislative Council participating in studies on licensing of laboratories and blood banks; problems involved with programs of the Department of Public Welfare; and important studies in the field of mental health.

(Delegation to Washington)

The report called attention to the meeting of Tennessee physicians with Tennessee members of Congress in Washington on March 5th, 1964 and the results of this unified professional front to our representatives in Congress.

(Services)

The staff and the Association have rendered public service in many vital activities during the past year. Recruitment of medical students, assistance to doctors in locat-

ing in communities where medical needs existed, communications, socio-economics and promotion of such programs as the Sabin Oral Vaccine; sponsored programs of Mental Health, Rural Health, Aid to the Aged, are examples of some of the programs in which the Association has been engaged in the past year. The Association has furnished information on medical education, quackery, insurance, and a myriad of subjects. Constant contact with key officials in all departments of the state and the federal government have been maintained. In all of these activities, the Executive Director and the staff have been most active.

(Public Service Activities)

A complete description of the leadership and the activities exerted by the Association in the field of public service and public relations was outlined. Press, radio, and television outlets and the manner in which news has been handled was presented. The operation of the press room during the annual meeting continues to present TMA's greatest exposure to the communications media. Participation in the Tennessee Plan was reviewed. Liaison with medical schools, physician groups, the American Medical Education and Research Foundation and the Association's Placement Service were outlined. Conferences in mental and rural health were reported as successfully undertaken.

(Journal Advertising)

Advertising in the Tennessee Medical JOURNAL continues to decrease and the figures were presented to the House of Delegates.

(Membership Records)

Membership records were reviewed showing that at the close of 1963, the Association's total membership was 2,999. Total members from Tennessee in the American Medical Association was 2,861.

(Council)

Activities of the Council were reviewed briefly, particularly relating to ethics and the problem of corporate practice of medicine and its status in the state at present. The principal business of the Board of Trustees was outlined since complete details were included in the report of the Board of Trustees. Major action and approvals made by the Board during the year were presented to the House.

(Recommendations)

The Executive Director strongly recommended the adoption of the By-laws change allowing the Board of Trustees to select well in advance, the meeting site for the annual meeting, due to the necessity of obtaining proper accommodations to present the annual meeting. This has to be done at least three years in advance.

(Summary)

Communications and liaison with some 3,000 physicians represents the Association's most important functions. The Executive Director and the staff coordinate efforts toward achievement of that objective.

REPORTS OF COMMITTEES

STANDING COMMITTEES

Report of Committee on Scientific Work And Postgraduate Education

R. H. KAMPMEIER, M.D. Chairman

Journal—The report revealed a continued downward trend in advertising in medical journals over recent years. In 1961 and 1962, advertising pages were respectively 676 and 678, as compared to 618 pages in 1963. Total pages of text in 1963 were 510. The Chairman pointed out that an attempt is made to acquaint the membership in the pages of the JOURNAL with the political, social, and economic changes current in this country as they may have an effect on medical practice. The President's Page, the Editorial Pages, Special Articles and Yellow Pages are especially directed toward such topics.

Dr. Kampmeier particularly pointed to the loss of Dr. Albert Weinstein, a member of the editorial board who had contributed much in time and energy to the publication of the JOURNAL. **"In his death the Editor lost a helpful associate as well as friend."**

General Scientific Meetings—Due to increasingly poor attendance at the general scientific meetings, the Committee on Scientific Work was charged in 1962 with giving thought to changes in the format of the

program. After discussions, the Committee met with representatives of each of the specialty societies on July 14th and the format for the 1963 meeting was developed. The general scientific sessions were eliminated and two or more programs by specialty groups were arranged for each half-day. Since the programs were open to all members of TMA, it was felt that this provided a wide choice compatible with the interests of doctors. The Wednesday morning program represented a collaboration of several specialties in the offering of a symposium type of discussion.

Report of Committee on Hospitals

ROBERT M. MILES, M.D., Chairman

In connection with the improvement of hospitals and medical services within hospitals in the State of Tennessee, a survey of hospitals with 25 beds or more, not presently approved by the Joint Commission on Accreditation, was conducted by the Committee in order to determine the number and percentage of hospital staffs which were formally organized and operating under a Constitution and By-Laws. It was ascertained that 56 hospitals in the State of this type were not accredited. All of the 50 hospitals answering the original questionnaire however, had chiefs of staff. Of the 46 chiefs of staffs answering further questionnaires, 41 hospitals were found to be organized and operating under a Constitution and By-Laws. The report stated that there is reason to believe that with encouragement and assistance such as is offered through the accreditation inspection teams sponsored jointly by the Tennessee Medical Association and the Tennessee Hospital Association, that hospitals in this category will eventually qualify for accreditation.

The report expressed concern on the part of the Committee about the increasing problem of the multitudinous number of signatures of the physician in charge now being required on hospital charts by the Joint Commission on Accreditation before they are deemed acceptable. A resolution was adopted by the Committee and presented to the House of Delegates. (R. No. 14-64 re Authentication of Hospital Records.)

The Chairman of the Committee on Hospitals, designated as a member of the Consultative Committee of Purveyors, Providers, and Payers of Health Care, met with this Committee on July 14, 1963 for its organizational meeting. This committee was organized to function as a liaison group between the Tennessee Medical Association, the Tennessee Hospital Association and the insurance industry to consider problems concerning the medical profession, hospital administration, and insurance companies.

Report of Committee on Legislation and Public Policy

TOM E. NESBITT, M.D., Chairman

Activities of the Legislative and Public Policy Committee were reported as follows: (1) The Committee coordinated efforts with staff personnel to formulate comprehensive testimony in opposition to H.R. 3920, the King-Anderson Bill. This testimony was presented to the House Ways and Means Committee on November 20, 1963, and has become a part of the official record of the public hearings. (2) A delegation of physicians representing each of the state's nine congressional districts visited Washington, D.C. in March and met with Tennessee's elected officials. TMA hosted a luncheon for the Senators and Congressmen and it was the Chairman's opinion that a warmer and closer relationship exists as a result of this annual affair. (3) Two state legislative matters of importance to the medical profession were referred to the committee. HJR 26, A Study on the Need for Inspecting and Licensing Blood Banks and Certain Laboratories, and HJR 38, A Study on Laws Relating to Mentally Ill Persons, were passed by the 83rd General Assembly which directed the Tennessee Legislative Council to conduct a study, hold public hearings, and report to the 84th Assembly its findings. The Committee appointed an 'ad hoc' committee of well qualified and informed members to formulate policy concerning HJR 26, and at the recommendation of this 'ad hoc' committee, three resolutions were presented to the House of Delegates. (R. No. 7-64 re Regulation of Medical Laboratories; R. No. 8-64 re Regulation of Blood Banks; R. No. 10-64 re Amendment to the Medical Practice Act.) HJR 38, A Study on Laws Relat-

ing to Mentally Ill Persons, was referred to the Chairman of the Mental Health Committee by the Board of Trustees. (4) House Bill 314 (An Act to amend Section 63-1402 of Tennessee Code Annotated, relating to dispensing opticians) passed both Houses in the 83rd General Assembly and was signed into law. This Bill was opposed by TMA and the Legislative Committee. A suit was filed in Chancery Court for Davidson County, Tennessee, seeking to have the Act declared invalid and unconstitutional as infringing on the rights of the medical profession and the dispensing optician. The Tennessee Dispensing Opticians requested TMA to become a party to this litigation. The Legislative and Public Policy Committee adopted a motion reaffirming the support of medicine to the opthalmologists and recommended to the Board of Trustees that legal action, as recommended by the TMA legal counsel, be taken. The Board of Trustees approved the recommendation.

The Chairman stated that plans are being formulated to increase the committee's effectiveness during the 84th General Assembly which will convene in January, 1965, and requested each member of the House of Delegates to aid in the Committee's work when called upon and respond with effective action in his respective community and county.

Report of Liaison Committee to Public Health Department

WILLIAM A. HENSLEY, M.D., Chairman

The Chairman and members of the Committee attended the semi-annual meetings of the Public Health Council. In the meeting on November 20th, two matters were referred to the Liaison Committee for consideration and action by the committee and the House of Delegates.

The first matter concerned approval or disapproval by the Tennessee Medical Association of the Division of Tuberculosis Control Program for Eradication of Tuberculosis in the State of Tennessee. This request for TMA's stand on the program had resulted from apparent objections voiced to the Department of Public Health and to the Council regarding this program. At the request of the Liaison Committee, the Tuberculosis Committee of TMA was reactivated to review this matter. The Tuberculosis Committee met on February 22nd and after discussion and consideration, adopted policy contained in Resolution No. 2-64 re Tuberculosis Eradication Program of the Tennessee Department of Public Health.

The second matter dealt with the Crippled Children's Service in the State of Tennessee. It was requested by the Public Health Council that this matter be brought before the House of Delegates for further study and recommendations. The Liaison Committee prepared and submitted to the House Resolution No. 3-64 concerning this program.

Report of Insurance Committee

WM. T. SATTERFIELD, M.D., Chairman

The Insurance Committee report gave a brief summary of the status of the Association's five group insurance plans: (1) Group Life Insurance (2) Professional Liability (3) Major Hospitalization (4) Professional Overhead Expense Insurance (5) Disability Insurance. The report was primarily statistical giving the number of claims and participating physicians. The Chairman stated that excellent cooperation had been received from the various carriers.

As directed in Resolution No. 6, adopted in 1963, the Committee made a study of HR-10 (Keogh legislation) and reported to the membership by letter the advantages and disadvantages of HR-10 and also apprised members of the retirement trust plan of the Memphis and Shelby County Medical Society. Any TMA member is eligible to participate in the Memphis plan.

Report of Memoirs Committee

HENRY L. DOUGLASS, M.D., Chairman

The Memoirs Committee reported that fifty-three members of the Tennessee Medical Association died during the calendar year ending March 1, 1964. The names of the deceased physicians were read by the Chairman.

"It is very difficult for anyone to weigh the lives of these several men or to foretell the ultimate impact of their deaths upon this medical society and the general public.

Most of them were born before the advent of the 20th century. Most of them could look back over careers in Medicine that averaged nearly 50 years, years of unprecedented change in all fields of human endeavor. One thing is certain: they were all individualists, and individualism was the hallmark of the Victorian era in America. In this sense, they were among the few remaining Victorian doctors who lived to practice in the Atomic Age. However they were not the last to embrace new truths, nor the first to leave old truths behind. And thus it was that in their time they embodied the best of both eras."

Report of Committee on Health Insurance

B. K. Hibbett, III, M.D., Chairman

The Health Insurance Committee has continued to study the possibility of a broader coverage under the Tennessee Plan which would encompass medicine, radiology, pathology, and pediatrics as well as surgery, obstetrics and gynecology. Specialty groups have submitted plans which they believe to be reasonable for the $2400 to $4200 income level and these have been reviewed by two actuaries. The Executive Sub-Committee met on several occasions to discuss this type of plan and its cost. It is their opinion that the feasibility of such a plan should be studied realizing that the premium for such a plan cannot be too costly. The Chairman stated that a recommendation would be made regarding the broader coverage at a later date after consultation with labor, management, farmers, and insurance groups.

The report stated that the Tennessee Hospital Service Association had been asked for an experience report on the Tennessee Senior Citizens Plan which has been in effect for one year. From this report, the Committee will be able to determine the status of this plan.

The latest survey revealed 1,225,993 persons in Tennessee covered under the Tennessee Plan. There are 39 commercial carriers and two non-profit associations (Blue Shield) underwriting the plan. Approximately 2,000 physicians participate in the Tennessee Plan, and 1,282 in the Senior Citizens Plan.

Medicare

The Executive Sub-Committee met on several occasions to consider changes in Medicare as proposed by the Department of Defense. There were no significant changes in the present contract from the previous year. The Committee recommended that before the new contract was signed that each physician in the state should have a copy of the fee schedule as printed by the Defense Department. The Board of Trustees approved the recommendation and the Department of Defense agreed to publish the schedule to be furnished to each member. The Medicare contract was negotiated effective December 1, 1963 and the present contract expires November 30, 1964.

Committee on Cancer

B. F. Byrd, Jr., M.D., Chairman

The report pointed out that under the present Indigent Hospitalization Program, funds for the care of cancer patients are inadequate and the committee requested the Board of Trustees to direct the Tennessee Medical Association's Legislative Committee to take appropriate steps to inform the legislators of the need for increasing funds for this program. The report further recommended that the Chairman of the Committee on Cancer write a letter to similarly interested associations, informing them of the action of the Board of Trustees relating to legislation and soliciting a committee to support means of obtaining more funds for the Indigent Hospitalization Program. The Committee felt that it was advisable to invite representatives from such interested associations to attend the next meeting of the Cancer Committee. This would be an attempt to further information available to those societies and to give an opportunity for a forum discussion of the general problems connected with cancer control in the state.

In its meeting on February 23rd, the Committee directed the Chairman to confer with the Editor of the TMA Journal and designate a person to be in charge of obtaining articles on cancer for publication in the Journal and then set up an arrangement whereby articles would be submitted to the Editor periodically.

The report also recommended the establishment of a cancer registry in all accredited hospitals in Tennessee with the idea that ultimately a State Registry may be established which would be a reliable method of collecting and compiling data.

Report of Advisory Committee to the State Department of Public Welfare

AUBREY B. HARWELL, M.D., Chairman

The report outlined certain expansions which had been realized in the Medical Assistance to the Aged Program in Tennessee: (1) A pharmaceutical consultant was engaged by the Department of Public Welfare and under his supervision a markedly expanded drug formulary was adopted and became effective on July 1st. (2) On November 1st, the income limits were raised from $1,000 to $1,300 for single persons and for married couples from $1,500 to $1,800. Included in the report was a Table showing the number of persons certified, the number of patients hospitalized, the drug prescriptions filled and nursing home care for a 20 month period and a 30 month period. The Chairman stated that it was obvious from these figures that MAA is a growing program which appears to be soundly administered.

Concerning other health care programs of the Welfare Department, it was reported that beginning July 1, 1963 the recipients of Old Age Assistance have shared in the drug formulary which was initially provided for the MAA program. Also, the definition of illness for recipients of OAA had been broadened to include life endangering and sight-threatening illnesses, the same definitions as have applied to MAA.

The report pointed out that inadequacies exist in the hospital benefits and the health care afforded recipients receiving assistance through Aid for Dependent Children, Aid for the Disabled and Aid to the Blind. "In each of these categories only ten days of hospitalization is available and that for acute illness or injury. No drug program and no other benefits are presently available. These people are entirely dependent on the Department of Public Welfare for their subsistence and many of them are recipients because of chronic diseases or deformities which render them unable to be employed." It was stated that the following items should be considered: (1) These categories of assistance should be given the same definitions regarding illness as the MAA and OAA programs; that is, life endangering and sight-threatening conditions. (2) The length of hospitalization should be equalized with the other two programs. (3) A drug formulary should be made available for recipients in these categories.

Report of Communications and Public Service Committee

R. A. CALANDRUCCIO, M.D., Chairman

The activities of the Communications and Public Service Committee dealt with two major problems: (1) a state-wide program of polio vaccination, and (2) Operation Hometown.

Resolution No. 5, adopted in 1963, directed the Committee to implement to the fullest extent possible, a state-wide Sabin Oral Vaccine immunization program for every citizen in Tennessee. The Committee felt that this could be done best by organizing the programs at the county level, and each county medical society was contacted and urged to participate. The Junior Chamber of Commerce was contacted in the counties without medical societies. It was reported that as of April 1st, 97½% or 92 out of 95 counties within the state had conducted or were conducting an immunization program. The report estimated that two million persons received the vaccine.

"Probably no single public service activity in the history of the Tennessee Medical Association has received as much newspaper, radio and television promotion as the Sabin Vaccine Program. The physicians of Tennessee can well be proud of this achievement and the image created in conducting these programs across the state. It is felt that the liaison with the lay community groups has been of definite public relations value."

Operation Hometown, conceived by the AMA to be organized by the State Societies and implemented at the county level, is a broad program instituted to present the facts concerning the current proposed fed-

eral legislation to provide a program of limited health services for the aged under Social Security. The Communications and Public Service Committee worked toward implementing such a program in each county medical society. The same percentage of county medical societies that participated in the Sabin program was not achieved with Operation Hometown. The report stated that there had been a lack of a sense of urgency concerning this problem because of many reports that the legislation would not be approved by the House Ways and Means Committee. The Public Service Director had visited each of the state's nine congressional districts and assisted in forming at least one Operation Hometown Committee in each district.

It was reported that the Physicians Placement Service, as in the past, had performed a valuable function in aiding physicians who wished to locate or relocate their practice in Tennessee.

Report of Rural Health Committee

JULIAN C. LENTZ, M.D., Chairman

The Rural Health Committee co-sponsored with the Tennessee Farm Bureau Federation and the University of Tennessee Agricultural Extension Service its first Rural Health Conference on October 9th in Knoxville. One hundred and thirty-four persons registered for the meeting representing twenty-two counties in Tennessee. Reports were extremely favorable from all groups who attended the Conference and plans are being made for a second conference to be held in October, 1964, at Jackson.

It was the opinion of the Committee that these programs are educational and beneficial and every effort will be made to make these Rural Health Conferences an annual affair.

Standing Committees Not Reporting

Standing Committees not making a report to the House of Delegates were:

1. Tennessee Medical Foundation Committee

The above reports were referred to Reference Committee A on Reports of Standing Committees.

SPECIAL COMMITTEES

Report of Committee on Disaster Medical Care

GEORGE R. LIVERMORE, JR., M.D., Chairman

Dr. George W. Paschal, Jr., from the American Medical Association's Committee on Disaster Medical Care, Mr. Gordon L. Fryer, Assistant Director of the Department of Government Medical Service of the AMA, and Mrs. J. H. Littlejohn, Director of Health Mobilization, State of Tennessee, attended a meeting of the Committee on Disaster Medical Care on October 26th. A major portion of the meeting was devoted to a discussion of the respective roles of the American Medical Association, the State Association and the County Societies in Disaster Medical Care. Discussion covered the relationship between Civil Defense, Public Health and the Medical Societies. At Dr. Paschal's request, the Committee recommended to the Board of Trustees that the name of the committee be changed to Committee on Disaster Medical Care to conform with the corresponding American Medical Association Committee.

Since the Committee felt that its role in Disaster Medical Care should be chiefly organizational and advisory, it was decided to establish liaison with the component societies through their respective Committees on Disaster Medical Care. If such did not exist, these societies were to be urged to create them. The component societies were also urged to organize local Health Resource Committees to correspond with the Governor's Health Resource Committee at the state level. The Committee also planned to urge each local society to explore programs for widespread active tetanus immunization—a program which could be available for launching during the next period of international crisis.

An investigation was made of legislation for drug control during civil and military emergencies. Such legislation exists in California and it was felt that similar programs should be adopted in all states. This matter is being explored with the American Medical Association since it was felt that uniformity from state to state is important for effectiveness.

The Medical Self-Help Training Program,

initiated by the TMA Auxiliary with the help and cooperation of Mr. Littlejohn, State Director of Health Mobilization, continues to be taught and is being used at present in many schools throughout the state.

Report of Committee on Occupational Health

GEORGE E. DUNCAN, M.D., Chairman

The Committee on Occupational Health submitted the following report of activities in 1963.

1) An exhibit entitled, "Occupational Health Needs the Family Physician" was displayed at the Tennessee Academy of General Practice annual meeting in Nashville, November, 1963. 2) The Davidson County Occupational Health Society was organized on December 10th. Subjects discussed at this meeting included "When Shall My Patient Return to Work?", "Occupational Dermatosis," "Average Fees in Compensation Cases," "Rehabilitation or Indemification." (3) An exhibit entitled "Physician's Relationship in Occupational Health" was displayed at the quarterly meeting of the Nashville Academy of Medicine in November. (4) The Committee lent support to the Davidson County Cancer Crusade by making educational materials available to the physicians and nurses interested in Occupational Health. (5) Articles on the psychiatric patient in industry were published in the Tennessee Medical JOURNAL, and a file of all publications of the Council on Occupational Health of AMA was made available to interested physicians.

Report of Liaison Committee to the United Mine Workers of America

JOHN H. SAFFOLD, M.D., Chairman

The Committee kept informed, in general, of the activities and policies of the UMWA Fund by the administrator of the Fund in the Knoxville area office.

It was pointed out that Dr. John Winebrenner who had been administering in the Knoxville area office since the inception of the Fund's activities, had been transferred to another area and Dr. Allen Koplin, former area administrator in Birmingham, had been transferred to Knoxville. The Committee expressed its profound sense of appreciation for the manner in which Dr. Winebrenner consistently assisted the committee in staying abreast of any problems and of constantly keeping in mind the continued welfare of organized medicine. The Chairman stated that it is anticipated that the same favorable era of cooperation will continue in the relationship with Dr. Koplin.

Two meetings were held during the year to discuss areas of mutual concern to the Welfare Fund and the Tennessee Medical Association.

Report of Advisory Committee to the Woman's Auxiliary to TMA

ROLAND H. MYERS, M.D., Chairman

The Chairman stated that the Committee had worked in conjunction with the Auxiliary officers during the year to supply any information or counsel requested. Many of the activities of the Auxiliary were commended. "For the fourth time, TMA's Auxiliary made history by winning the national AMA-ERF Trophy. This year the honor was shared by Ohio, but no other state begins to match the Tennessee record. In public service, safety and health projects, health career recruiting, and educational programs, the fifteen county auxiliaries have made such outstanding records that a majority of them have been cited by their communities. This year a new committee was organized, International Health Activities, which deals with collecting drugs, medical books, and equipment for the medical missionaries. And politically speaking, they have made phone calls and written letters by the hundreds."

Realizing the aid given to the medical profession by the Auxiliary members, the Committee urged each physician to encourage his wife to become active in her local auxiliary.

Report of Committee on Blood Banks

MERLIN L. TRUMBULL, M.D., Chairman

The principal activity of the Committee had been one revolving around the General Assembly's House Joint Resolution 26. HJR 26, in essence, called for a study for the possible need for licensing medical laboratories and blood banks in Tennessee. The Board

of Trustees of TMA requested the Chairman of the Committee on Blood Banks to make a statement before the Legislative Council Committee on behalf of the TMA on July 30th. Because of the short interval between the request and the day of the hearings, the statement prepared was a personal statement from the chairman of the Committee. The attitude of the statement was one disapproving licensure because the TMA, the AMA repeatedly, and all professional organizations of the specialties involved have stated that laboratory medicine was the practice of medicine; therefore, licensure of laboratories and blood banks was not needed—rather insistence upon the directors of these facilities being licensed physicians was the real need. The report stated that members of the Committee concurred in the contents of the statement and the House of Delegates should take action for approval or disapproval when voting upon the resolutions presented concerning this matter.

The committee expressed concern over the accelerated growth of various forms of assurance and insurance plans for providing for blood itself when the beneficiaries of these plans require it. The rapid growth of these plans, especially those which accept primarily cash in lieu of donation as a premium, has been of some increasing concern to national organizations in this field because it is believed that if the trend is continued the use of the voluntary replacement donor will vanish. The American Association of Blood Banks and the American Society of Clinical Pathologists firmly believe that the replacement donor concept for supplying as much of the blood needs as possible is the soundest long-term approach.

The Chairman called attention to the fact that upon reactivation of the AMA Committee on Blood, Dr. Charles Smeltzer of Knoxville was appointed as a member of the Committee.

Report of the Committee on Mental Health

FRANK H. LUTON, M.D., Chairman

The report stated that the activities of the Committee on Mental Health had been diverse and productive in the preceding year. It was felt that the Committee had been strengthened with the addition of several internists, general practitioners, and a pediatrician, all of whom had offered points of view that had been helpful in the development of a program that it is hoped will (1) make the psychiatrist more aware of his responsibility in contributing to the continuing education of the physician; and (2) bring to the non-psychiatric physician greater understanding of his own responsibility in the field of mental health—an area which has been accepted by medicine as "America's most pressing and complex problem."

The First Tennessee Congress on Mental Illness and Health, authorized by the House of Delegates in 1962, was held in Nashville on November 13-14. The total number of registrants for the Congress was 438, and enthusiastic and laudatory comments were received on the qualities of the presentations, the usefulness of the roundtable discussions, as well as the timeliness of the endeavor. The report recognized the valuable contributions to the success of the program by Dr. Bland Cannon, President; Dr. Joseph W. Johnson, Jr., co-chairman of the Steering Committee for the Congress; and Mr. Hadley Williams, Public Service Director of TMA.

Two meetings of the Committee were held during the year, one in Memphis at the Tennessee Psychiatric Institute and Hospital and a second at the Central State Hospital in Nashville. These meetings were for the purpose of becoming more familiar with actual programs of service, training and research within the institutions and also to give the staff members some concept of the aims of the committee.

A significant event in the field of mental health occurred in the form of a study by the Legislative Council of the Tennessee General Assembly of laws relating to mental health in Tennessee. All groups having interest in modification and clarification of the present legal structure were invited to present statements to the Council. The Chairman of the Mental Health Committee, at the request of the Board of Trustees, attended the hearing to review the statements presented. These statements were summarized and discussed at a meeting of the

Committee on February 27th, at which time a number of recommendations were made for presentation to the House of Delegates:

(1) Voluntary admission—There is an increasing tendency to make admission to a mental hospital a matter of need because of illness, and therefore something based on the recommendation of his physician. His hospitalization should then be possible without the intervention or association with any legal agency.

(2) Involuntary admission—Certain patients are so sick that they may harm themselves or others and may not understand the need for treatment in a mental hospital. These may, as a last resort, be hospitalized against their will. If this is necessary, it should be possible for such a person to be admitted for a short period of observation on the certification of two licensed physicians. If it is determined that he is in need of prolonged hospitalization, then judicial commitment is necessary for the patient's protection.

(3) Mental competency: It has been assumed that admission to a mental hospital by regular commitment is automatically associated with incompetency, with consequent loss of civil rights. This is a right which should be reviewed in each case and loss of it should be based entirely upon a situation which involves an inability to exercise adequate judgment in the execution of the rights enjoyed by any citizen.

(4) Change in present county quota system—The Department of Mental Health feels that the present system of allocation of vacancies is antiquated and does not fulfill the needs of all the patients who should be hospitalized. The committee recommended that legal authority be given for the development by the Department of a formula for a more equitable solution to the problem.

(5) Laws relating to involuntary admission of certain persons addicted to alcohol and drugs—Hospitalization for some patients in this category is the only satisfactory solution. The suggestion is made, however, that no definite period of hospitalization be designated in a law authorizing such commitment.

Other recommendations made at the hearings of the Legislative Council and accepted by the Committee were: (1) Legislation recognizing the existence of present mental health centers and providing for the establishment of new centers when needed and when facilities and adequate staff is available. (2) Laws which provide for Tennessee's participation in the "Interstate Compact on Mental Health." (3) Establishment of the right of privileged communication between the patient and his physician.

The Committee also recommended (a) that the TMA recognize the importance of the relationship between mental retardation and mental illness and that the membership of the committee be increased to include persons with this special interest; (b) support by the TMA membership of the Second American Medical Association Congress on Mental Health in October 1934; (c) continue and participate in the Steering Committee formed prior to the First Tennessee Congress on Mental Illness and Health; and (d) re-emphasize the 1963 recommendation that there be more activity in the field of mental health at the county society level.

Report of Health Project Contest Committee

Lawrence L. Cohen, M.D., Chairman

The 11th Annual Health Project Contest attracted twenty entries from high schools throughout the state. All entries were significant achievements and appeared to have served school programs. Subjects covered a wide range of interests and were presented in a manner indicating imagination, industry and perserverence expended by those sponsors and students who elected to participate. The awards totaling $1,150 were presented to five winners:

First Place: Grundy County High School, Biology Classes, Tracy City, "Sanitation, A Way of Life"—$500

Second Place: East Ridge High School, East Ridge Health Classes, "Can the Divorce Disease Be Cured?"—$300

Third Place: Arnold Junior High School, The Excalibur Club, Cleveland, "The Use of Diet and Exercise in Correcting Figure Faults"—$200

Fourth Place: Bradley Central High School, Senior 4-H Club, Cleveland,

"Signs to Better Health"—$150

The fifth place award of $100 by the woman's Auxiliary was made to the Kirkman Technical High School, Industrial Hygiene Classes, Chattanooga, on the project entitled "Improving My Appearance."

The following recommendations were submitted by the Committee for the program in 1964: (1) That each school or group, which proposes to submit an entry be required to fill out an application signifying their intention. (2) That approval for the contest be obtained from the Tennessee Department of Education in the spring of each year, instead of the fall as is now the practice, in order that the contest rules could be included in the early fall mailing to the schools by the State Education Department. (3) That a list of the local county chairmen to serve the following year be compiled by the Woman's Auxiliary to the TMA and sent to the Public Service Office as soon as possible following the annual meeting of the Auxiliary.

Report of Committee on Sight Conservation

FRED A. ROWE, M.D., Chairman

The principal function of the Committee had been the concern over House Bill No. 314. This bill, which was proposed by the optometrists, defines the practice of the dispensing opticians. The bill passed in the 1963 General Assembly by an over-whelming majority. The Tennessee Dispensing Opticians Association filed a suit in the Chancery Court of Davidson County Tennessee asking the courts to declare the act invalid and unconstitutional, infringing on the rights of the medical profession and the dispensing optician. The Tennessee Academy of Ophthalmology and Otolaryngology, along with members of the Committee on Sight Conservation, retained an attorney to represent the ophthalmologists of the state. The attorney, along with the TMA attorney, has filed a petition to intervene in the suit.

Report of the Tennessee Committee for the American Medical Education and Research Foundation

DAVID S. CARROLL, M.D., Chairman

The report outlined the continued growth of the American Medical Education and Research Foundation. It was stated that since March, 1962, the AMA-ERF Medical Education Loan Guarantee Program had secured more than 11,500 commercial bank loans for medical students, interns and residents who needed additional money during their training periods. In principal amount, nearly 14 million dollars has been loaned.

Physicians, their families and friends, contributed a record amount to the funds for medical school programs, while giving generously at the same time to the loan guarantee program. In 1963, physicians throughout the country gave $1,208,463 to the funds for medical school programs. Most of this sum was ear-marked for specific schools by contributors. Undesignated gifts were apportioned equally among the country's approved medical schools. Tennessee's three medical schools received a total of $33,933.05 as a result of the 1963 contributions. The University of Tennessee College of Medicine received $15,190.73; Vanderbilt University School of Medicine, $12,138.41; and Meharry Medical College, $6,603.91.

Efforts of the Woman's Auxiliary to TMA in securing contributions to the AMA-ERF were commended by the Committee. As of March 1, 1964, the Woman's Auxiliary had secured a total of $17,065.18 for AMA-ERF.

The report urged the continued support of the Foundation by all physicians.

Report of Committee on Youth and Education

JOHN H. BURKHART, M.D., Chairman

The report stated that there had been no occasion or need for the Committee to meet during the year. Its chief activity had been to arrange and supply a speaker at the annual Tennessee Secondary Schools Athletic Association Coaches Clinic held in Cookeville in July. This was done at the request of the Executive Secretary of TSSAA. Other matters had been met and disposed of by the Chairman without the necessity or advisability of a full scale meeting of the committee. It was pointed out that the committee was to a large extent a standby committee and should be continued in that capacity.

Report of Committee on Medicine and Religion

H. Dewey Peters, M.D., Chairman

The Committee on Medicine and Religion was established at the recommendation of the Department of Medicine and Religion of the AMA. Its principal function is to encourage the establishment of comparable committees on the county society level. Plans for organizing work in county societies, workers' kits for use as a guide and various helpful pamphlets and literature have been furnished to the committee to give basic plans for organization and programming.

It was reported that the Nashville, Chattanooga and Memphis areas have local committees organized and functioning. The Knoxville Academy of Medicine has an active local committee which has had several meetings with members of the local clergy.

The Chairman stated that the idea of collaboration between the medical profession and clergy had met with favor and it is believed such a program will be for the good of patients and both professions.

It was pointed out that the Committee held a dinner meeting in Nashville on April 27th with leaders of the various religious denominations attending.

Report of Committee on Tuberculosis

Hollis E. Johnson, M.D., Chairman

The TMA Committee on Tuberculosis was reactivated in February, 1964, for the purpose of studying and analyzing the Tennessee Department of Public Health's Tuberculosis Field Service Program. The Committee was requested to make recommendations to the Chairman of the Liaison Committee to the Public Health Department for the purpose of developing a resolution for presentation to the House of Delegates on the policy of the TMA on the Tuberculosis Field Service Program.

The Chairman of the Liaison Committee met with the Committee on Tuberculosis on February 22nd to discuss the problems involved. The Committee discussed the scientific status of the program and it was believed that an administrative breakdown was the reason for much of the dissension about the program. It was recommended by the Committee that some of the information forwarded to physicians of the state should be rewritten and clarified. It was the Committee's opinion that there was a misunderstanding on the part of physicians on treating some cases outlined in the program. After carefully analyzing all aspects of the Program on Tuberculosis, the Committee recommended approval of it with certain exceptions which are embodied in Resolution No. 2-64 entitled "Tuberculosis Eradication Program of the Tennessee Department of Public Health."

Special Committees Not Reporting

Special Committees not making a report to the House of Delegates were:

1. Consultative Committee on Prepaid Medical Care Plans
2. Committee on Governmental Medical Services
3. Interprofessional Liaison Committee

The above reports of special committees were referred to Reference Committee B on Reports of Special Committees.

SPECIAL REPORTS

Report of Woman's Auxiliary to Tennessee Medical Association

Mrs. W. E. Van Order, President

The President of the Woman's Auxiliary to TMA outlined activities and accomplishments during the year. The American Medical Association Education and Research Foundation was listed as one of the priority projects. The report stated that Tennessee had shown a steady increase in contributions. The amount raised by the Auxiliary to date is more than $17,000.00.

Self-Help programs had been taught in many counties. Two members of the Auxiliary took ten-hour courses in Radiological Monitoring and Biological Effects in Radiation at Eastern Tennessee State University. They were qualified as monitors and issued equipment. They then taught a modified course from "Civil Defense Medical Self-Help" to approximately sixty PTA members. One Auxiliary of ninety members initiated and carried out an evacuation program for fourteen schools.

The report listed numerous organizations

that had requested and received assistance from the Auxiliary. Health Career Clubs were formed and Career Days stressed. A total of $2,418.00 was raised for loans and scholarships. One Auxiliary helped nine students in 1963, another six and another five. A new Committee on International Health Activities was established with the purpose of collecting drugs, medical books and equipment for medical missionaries. The Auxiliary's Legislative Committee had been extremely active. Letters were sent by the hundreds and phone calls made by the thousands. The Auxiliary was one of the three sponsors of the successful First Tennessee Congress on Mental Illness and Health. Gun safety, poison control, seat belts, traffic and water safety were listed as points of interest and activity by the Auxiliary.

In quoting a county auxiliary, "We are active in our community and you will find some of us at work when there is a project to be done.", the Chairman stated that this is true of all members of the Woman's Auxiliary.

Report of AMA Delegation

ALVIN J. INGRAM, M.D., Chairman

The report of the AMA Delegation covered important actions of the House of Delegates at the annual meeting in Atlantic City in June, 1963, and the clinical meeting in Portland, Oregon, in December, 1963.

(Annual Meeting)

(1) The membership of the Board of Trustees was changed so that it is now composed of the President-Elect, the President, the immediate Past President and twelve trustees. The trustees will serve three year terms and may serve a maximum of three terms.

(2) Two reports concerning the organization of the Scientific Sections were presented. The reports were largely accepted, except that the officers and delegates of the sections will be chosen by vote of the section members and not by appointment. A system of permanent registration within sections will be established and to change one's registration, the member must submit such a request in writing to the AMA office at least sixty days before the effective date of such a transfer.

(3) Two important Judicial Council opinions were considered by the House. One of these forbidding the dispensing of glasses by ophthalmologists, opposed by the Tennessee delegation and others, was not adopted. A second opinion was adopted and it is now unethical for a physician to own stock in a drug repackaging firm (JAMA May 4, 1963, p. 357).

(4) The joint report of the Councils on Medical Service, and Medical Education and Hospitals dealing with compensation of interns and residents, was not adopted. After discussion, the House was recorded in opposition to any system or program by which any part of an intern's or resident's salary is paid out of fees collected by the attending physicians or under any type of medical surgical insurance coverage.

In other actions during the annual meeting, the House also disapproved of the use of Federal funds for staffing mental health institutions; recommended restudy of the AMA stated policy in support of non-recurring federal grants ("bricks and mortar grants") for construction of medical facilities; called attention to the "Liberty Amendment" for individual consideration and attention; expressed opposition to the construction of "diagnostic centers" under the Hill-Burton program; supported Congressman Baker's (R., Tenn.) Bill 4511 which would permit the MAA program to be administered by a state agency other than the one which administers the Old Age Assistance (Welfare) program; and strongly urged local medical societies in the vicinity of medical schools to establish and maintain clear lines of communication with the Student AMA for the purpose of informing them of the policies of AMA on scientific and socio-economic matters.

(Clinical Meeting)

(1) Approved a Board of Trustees proposal that the American Medical Association Education and Research Foundation undertake a 'comprehensive program of research on tobacco and health devoted primarily to determining which significant human ailments may be caused or aggravated

From the Executive Director

MEDICAL DIGEST

News of Interest to Doctors in Tennessee

Annual Meeting Highlights

Attendance—1964 Annual Meeting

● Annual Meeting registration—787. Final registration figures show 513 Tennessee physicians registered, including residents and interns. There were 114 exhibitors and guests for a total of 627. Of this number, 528 were doctors. There were 160 members of the Woman's Auxiliary recorded. Total, 787 registered at the Memphis meeting.

Dr. R. H. Kampmeier Assumes Presidency

● At the Annual Meeting, Dr. R. H. Kampmeier, Nashville, assumed the Presidency at the Banquet on the evening of April 13, when he succeeded Dr. Bland W. Cannon of Memphis.

Dr. John H. Burkhart President-Elect

● The President-Elect to lead TMA next year is Dr. John H. Burkhart, Knoxville, who will succeed to the Presidency during the 1965 meeting in Chattanooga.

Board of Trustees

● Elected as Chairman of the Board of Trustees was Dr. John H. Burkhart, Knoxville. Dr. John C. Burch, Nashville, was named Vice-Chairman and Treasurer. Elected to the Board of Trustees for a three-year term was: Dr. John C. Burch.

Dr. Charles A. Trahern, Clarksville, was elected Secretary. In addition to those newly elected, the Board of Trustees includes Drs. Burkhart, Knoxville; J. Malcolm Aste, Memphis; Bland W. Cannon, Memphis; E. L. Caudill, Jr., Elizabethton; C. D. Hawkes, Memphis; G. Baker Hubbard, Jackson; Joseph W. Johnson, Jr., Chattanooga; R. H. Kampmeier, Nashville; K. M. Kressenberg, Pulaski.

Vice-Presidents

● Elected for the 1964-65 year as Vice-Presidents were: Drs. George K. Henshall, Chattanooga, East Tennessee; Robert M. Finks, Nashville, Middle Tennessee; and Lamb B. Myhr, Jackson, West Tennessee.

Members of the Council

● Newly elected councilors were: Drs. J. J. Range, Johnson City—First District; John Derryberry, Shelbyville—Fifth District; Carl C. Gardner, Jr., Columbia—Seventh District; and Byron O. Garner, Union City—Ninth District. Other members of the Council continuing to serve will be Drs. B. M. Overholt, Knoxville—Second District; M. F. Langston, Chattanooga—Third District; Kenneth L. Haile, Cookeville—Fourth District; Harry T. Moore, Jr., Nashville—Sixth District; O. M. McCallum, Henderson—Eighth District; Francis H. Cole, Memphis—Tenth District. Dr. Cole was re-elected to serve as Chairman.

AMA Delegates and Alternate Delegates

● Dr. Charles C. Smeltzer, Knoxville, was re-elected for a two-year term as delegate to the American Medical Association. The alternate delegate re-elcted was Dr. William J. Sheridan, Chattanooga. Both of these physicians represent the East Tennessee Grand Division. Hold-over delegates include Dr. Alvin J. Ingram, Memphis, and Dr. Daugh W. Smith, Nashville. Alternates—Dr. Julian K. Welch, Jr., Brownsville and Dr. W. O. Vaughan, Nashville.

Speaker & Vice-Speaker of House of Delegates

● Dr. J. Malcolm Aste, Memphis, was re-elected Speaker of the House of Delegates for 1964-65. Dr. Tom E. Nesbitt, Nashville, Vice-Speaker of the House, was re-elected for another year.

Outstanding Physician of the Year—Dr. J. O. Walker, Franklin

● Dr. J. O. Walker, Franklin, was the recipient of the award made to the Outstanding Physician of the Year. Dr. Walker has made many contributions to medicine, and to the care of his patients in Williamson County and the entire community. In addition to his many medical contributions, Dr. Walker served three successive sessions in the General Assembly in the State of Tennessee. In 1961, he was elected State Senator from the 21st Senatorial District. Other physicians who were finalists and considered in the balloting for the award were: Dr. Oliver William Hill, Jr., Knoxville, and Dr. James S. Speed, Memphis.

House of Delegates

● Important actions of the House included policy decisions on twenty-one resolutions. Included were those on the subjects of Incorporation of the Tennessee Medical Association; Tuberculosis Eradication Program of the Tennessee Department of Public Health; the Crippled Children's Service Program in Tennessee; Recommendations for Expansion for the Medical Aid for the Aged Program; Support of Independent Medicine's Political Action Committee—Tennessee; Regulation of Medical Laboratories and Blood Banks; Regulations Regarding Training and Education of Medical Technicians and Laboratory Assistants; Amendment to the Medical Practice Act; Relationship between Anesthesiologists and Certain Insurance Carriers; Educational Program of the Medical Assistants Society of Tennessee; Nominees to fill vacancies on medical section of Board of Directors of Tennessee Hospital Service Association; Implementation of Kerr-Mills Program; and a resolution dealing with the time element of introduction of resolutions in the TMA House of Delegates. In addition, two amendments to the By-Laws were submitted and adopted.

President's Banquet

● The President's Banquet was centered around the theme of information and entertainment, thus making it one of the features of the Annual Meeting. Dr. Bland Cannon, President, presented a stirring speech entitled "Identification". The contents of this presentation is contained in this issue of the Journal.

A special award to the outstanding physician of the year was made. Awards were also presented to the Health Project Contest Winners. The contest was sponsored by the Tennessee Medical Association and a check of $500 was presented to the representative of the Biology Class of the Grundy County High School in Tracy City, Tennessee. The social aspect of the Banquet continued following dinner with dancing to the music of Berl Olswanger and his orchestra.

1965 Annual Meeting to be Conducted in Chattanooga

● The 1965 Annual Meeting will be conducted in Chattanooga with headquarters at the Read House Hotel. The dates for the meeting will be April 11-14.

TMA Membership

● On January 1, 1964, the total number of physicians that held membership in TMA was 2,999. Tennessee physicians holding membership in the American Medical Association totaled 2,861.

Tennessee Included in 50 States Gaining in Health Benefits in 1963

● Every state in the Union had a sizable increase over the previous year.

The South, second to the Midwest in benefits with an estimated $1,054,920,000, was first in the rate of increase with an 11.4 per cent rise over the $947,000,000 paid Southerners in 1962. The 16-state region included all of the South and the Southeast including Tennessee plus the Southwestern states of Arkansas, Oklahoma, and Texas. Tennessee showed $75,144,000 paid in benefits, a 10.8 per cent increase over 1962.

Public Service

THE TENNESSEE TEN

Hadley Williams, Public Service Director

Drug Formulary Revised for MAA

● A revision to the drug formulary utilized for recipients of the Medical Aid for the Aged and Old Age Assistance programs became effective June 1, 1964.

Basic changes in the formulary were addition of drugs, an extension of the supply authorized to be dispensed on any one prescription and a new method of arriving at charges to be made to the State by pharmacists supplying the drugs.

Commissioner of Welfare Roy S. Nicks announced that the changes were result of a meeting with the Liaison Committee of the Tennessee State Pharmaceutical Association and that the Committee concurred in all of the changes effected.

A meeting of the Tennessee Medical Association's Advisory Committee to the Public Welfare Department was held in early May, at which time discussions were conducted with Commissioner Nicks in regard to improving medical services available to recipients of programs administered by his Department. Dr. Kenneth M. Kressenberg of Pulaski is Chairman of the Committee.

One Billion Dollars for Health Quackery

● A recent article by Sylvia Porter in 'Medical World News' revealed that Americans are being duped by health quackery gimmicks to the tune of one billion dollars a year.

Fake medicines, useless diet supplements, potency restorers, baldness cures and all-purpose electronic diagnostic devices are some of the many schemes used by health swindlers.

Phony arthritis cures alone bilked an estimated $250,000 from a gullible American public last year. Phony vitamins, dietary and nutritional gimmicks cost another $500 million.

A victim will not only waste his money on fake cures, he may also risk his life by postponing proper medical treatment for his ailment. Physicians should constantly be on guard for phony cures and claims, alerting their patients to the waste of money and possible danger involved in their subscription.

Dr. Blasingame Visits Memphis

● Dr. F. J. L. Blasingame, executive vice-president of the American Medical Association, spoke at the June 2 meeting of the Memphis-Shelby County Medical Society. Dr. Blasingame also addressed the Memphis Rotary Club at a luncheon on the same date.

New AMA Pamphlets

● Physicians who have purchased and use pamphlet racks in their waiting rooms may want to replenish their supply of pamphlet material with several new AMA information items.

"Smoking Facts You Should Know," "A Child in the Family," "How to be a Good Patient," "Physician Fitness," and "Your Health Examination" are titles of new pamphlets. A free catalog describing some 45 other AMA pamphlets is available by writing American Medical Association, 535 North Dearborn Street, Chicago, Illinois 60610.

Pamphlets are an ideal way to give your patients helpful information on their personal health problems.

Thought for the Month

● Be thankful for your troubles; they're responsible for 90% of your income.

ANNUAL MEETING HIGHLIGHTS



1. Dr. Bland W. Cannon, retiring president, presented the gavel to Dr. R. H. Kampmeier at the President's Banquet. 2. The Continental Ballroom of the Peabody Hotel was packed for the Monday evening President's Banquet. 3. Dr. Cannon delivered the main address at the Banquet. 4. Speaker of the House of Delegates, Dr. J. Malcolm Aste, presented the "Physician of the Year" award to Dr. J. O. Walker of Franklin, Tenn. 5. Dr. David S. Carroll, chairman of the AMA-ERF Committee, presented checks totaling $33,933 to Drs. Randolph Batson, Dean of the Vanderbilt University School of Medicine; Daniel T. Rolfe, Dean of Meharry Medical College and M. K. Callison, Dean of the University of Tennessee College of Medicine prior to a meeting of the TMA Liaison Committee to Medical Schools. 6. Dr. R. M. Finks presented a check for $500 to the Health Project Contest winners. Mrs. J. C. Ray, sponsor of the Grundy County High School Biology Class, Miss Charlotte Hutcheson and Miss Lana Roberts were on hand to accept the award. 7. Officers elected to serve TMA for 1964 are seated, left to right: Dr. R. M. Finks, Vice-President for Middle Tennessee; Dr. Lamb B. Myhr, Vice-President for West Tennessee; Dr. George K. Henshall, Vice-President for East Tennessee; and Dr. Charles A. Trahern, Secretary. Standing: Dr. John H. Burkhart, President-Elect; Dr. R. H. Kampmeier, President; Dr. J. Malcolm Aste, Speaker of the House; and Dr. Tom E. Nesbitt, Vice-Speaker of the House of Delegates.

by smoking, how they may be caused, the particular element or elements in smoke that may be the causal or aggravating agent and methods for the elimination of such agent.'

(2) Considered two proposals related to Negro physicians—In adopting a Board of Trustees report, the House declared that 'members of the medical staff of every hospital, where the admission of physicians to hospital staff privileges is subject to restrictive policies and practices based on race, be urged to study this question in the light of prevailing conditions with a view to taking such steps as they may elect to the end that all men and women professionally and ethically qualified shall be eligible for admission to hospital staff privileges on an equal basis, regardless of race.'

(3) In approving a Board report on professional relationships with voluntary health agencies, the House declared: 'that the AMA maintain its policy of neither approving nor disapproving national voluntary health agencies; that the AMA, through its Committee on Voluntary Health Agencies, maintain its position of offering guidance on medical aspects of national voluntary health agencies; and agreed with a recommendation that the Committee on Voluntary Health Agencies be given the status of a council in the AMA organizational structure.'

(4) Adopted a policy statement pointing out that in recent years there has been a dramatic growth of blood banking facilities in the U.S. and declaring that 'it is highly essential that the organization of new blood banking programs and the modification of existing ones should have, in the interest of public health and safety, the approval of the county or district medical society and, therefore should be coordinated with existing approved blood banking facilities.'

The Chairman pointed out that a detailed report of the proceedings of the AMA House of Delegates is regularly published in the JAMA, the AMA NEWS and the JOURNAL and urged physicians to study this report.

The special reports were referred to the Reference Committee on Reports of Special Committees—Reference Committee B.

Report of Reference Committee on Outstanding Physician of the Year Award

HARMON L. MONROE, M.D., Chairman

The Speaker called for the report of the Reference Committee on the Outstanding Physician of the Year Award and the election.

Dr. Harmon L. Monroe, Chairman of the Reference Committee, stated that the Committee wished to nominate for consideration of the House, three physicians for the award. The candidates were: Dr. James O. Walker, Franklin, a member of the Williamson County Medical Society; Dr. James Spencer Speed, Memphis, a member of the Memphis and Shelby County Society; and Dr. Oliver William Hill, Knoxville, a member of the Knoxville Academy of Medicine.

The Speaker called for the five-minute nominating speeches for each of the candidates. Dr. John H. Burkhart, Knoxville, spoke in behalf of Dr. Hill; Dr. R. H. Hutcheson, Nashville, spoke in behalf of Dr. Walker; and Dr. Marcus J. Stewart, Memphis, spoke in behalf of Dr. Speed.

Following the nominating speeches, the Speaker asked members of the House to prepare ballots and appointed tellers to count the ballots.

Election of Physician of the Year

The result of the balloting was announced by the Speaker. Dr. James O. Walker of Franklin was named the Outstanding Physician of the Year in Tennessee for 1964.

Introduction of Guests

Mr. Charles L. Cornelius, Jr., Attorney for TMA, was introduced to members of the House by Dr. Bland W. Cannon, President.

The Speaker presented Dr. D. T. Rolfe, Dean of Meharry Medical College; Mrs. Elizabeth Margulis, AMA Field Representative of Women's Organizations; and Mr. Bill Ramsey of the AMA Field Services Division.

Announcements

Announcements were made by the Speaker pertaining to the meeting of the Reference Committees, and all members were urged to appear before the respective Reference Committee to present their views

concerning any of the reports, resolutions and amendments.

There being no further business, the first session of the House of Delegates recessed at 4:45 P.M. until 9:00 A.M., Tuesday, April 14, 1964.

Tuesday Morning Session April 14, 1964

The House of Delegates reconvened at 9:00 A.M. in the Peabody Hotel, Memphis, with Dr. J. Malcolm Aste, Speaker of the House presiding.

Dr. Carl E. Adams, Murfreesboro, Chairman of the Credentials Committee, reported a quorum of registered delegates present.

Introduction of Guests

The Speaker introduced Mrs. E. E. Edwards, Past President of the Woman's Auxiliary to TMA, who in turn, introduced Mrs. C. Rodney Stoltz of Watertown, South Dakota, President of the Woman's Auxiliary to the American Medical Association. Mrs. Stoltz replied with a brief address to the delegates.

Report of Nominating Committee and Election of Officers

Richard C. Sexton, Jr., M.D., Chairman

PRESIDENT-ELECT—Dr. John H. Burkhart, Knoxville

SPEAKER OF THE HOUSE OF DELEGATES—Dr. J. Malcolm Aste, Memphis

VICE SPEAKER OF THE HOUSE OF DELEGATES—Dr. Tom E. Nesbitt, Nashville

SECRETARY—Dr. Charles A. Trahern, Clarksville

VICE-PRESIDENT (East Tennessee)—Dr. George K. Henshall, Chattanooga

VICE-PRESIDENT (Middle Tennessee)—Dr. Robert M. Finks, Nashville

VICE-PRESIDENT (West Tennessee)—Dr. Lamb B. Myhr, Jackson

TRUSTEE from Middle Tennessee (Three-year term)—Dr. John C. Burch, Nashville

COUNCILOR FROM FIRST DISTRICT (Two-year term)—Dr. J. J. Range, Johnson City

COUNCILOR FROM THIRD DISTRICT (Two-year term)—Dr. M. F. Langston, Chattanooga

COUNCILOR FROM FIFTH DISTRICT (Two-year term)—Dr. John Derryberry, Shelbyville

COUNCILOR FROM SEVENTH DISTRICT (Two-year term)—Dr. Carl Gardner, Columbia

COUNCILOR FROM NINTH DISTRICT (Two-year term)—Dr. Byron O. Garner, Union City

DELEGATE to the American Medical Association (East Tennessee)—Dr. Charles Smeltzer, Knoxville

ALTERNATE DELEGATE to AMA (East Tennessee)—Dr. William J. Sheridan, Chattanooga

The House voted upon the nominees individually and in each instance, the Speaker called for additional nominations from the floor. There were no nominations from the floor and **all of the nominees submitted above were elected by the House of Delegates.**

The Nominating Committee presented the names of three physicians from East Tennessee for the Board of Trustees of the State Tuberculosis Hospitals—one of whom will be subsequently appointed by the Governor.

Dr. S. J. Sullivan, Cleveland
Dr. Roy W. Epperson, Athens
Dr. Robert Newman, Knoxville

The Speaker called for additional nominations; there being none, **the above physicians were elected by the House of Delegates.**

The Committee presented the names of three physicians from Middle Tennessee for the Public Health Council—one to be subsequently appointed by the Governor.

Dr. Greer Ricketson, Nashville
Dr. L. B. Molloy, Lawrenceburg
Dr. Wm. K. Owen, Pulaski

The Speaker called for additional nominations; there being none, **the above physicians were elected.**

Following the completion of the Nominating Committee report, it was moved, duly seconded, and **the Report of the Nominating Committee was accepted as a whole.**

The Speaker invited Dr. John H. Burkhart, President Elect to become President of the Tennessee Medical Association in

1965, to come forward and be recognized by members of the House.

DR. BURKHART: "My friends, my good friends, inevitably honors come to men in any walk of life and in all candor and in all humility I must state that I have had many and have appreciated all of them. But, likewise in all candor and with all sincerity, I must tell you this morning that I have never been as honored as I am at this time when you who are members of my chosen profession share with me the tremendous responsibility of practicing medicine in the State of Tennessee in the manner in which we all feel that we are qualified, have selected me to be the President-Elect of the TMA. I can only say 'thank you very much from the very bottom of my heart.' I know, as you do, that in the past year and the years before you have had excellent leadership—that in the coming year you will have excellent leadership. I only hope that in the years succeeding you will have as good leadership as you are entitled to. I pledge to you that with your help I will do all within my power to try to make this come true. Thank you so much for this tremendous honor."

Report of Reference Committee on Amendments to the Constitution and By-Laws

JOHN H. BURKHART, M.D., Chairman

Amendment to By-Laws—No. 1

Amend Chapter II, Section 1, Paragraph 1, of the By-Laws by deleting the words, "at the preceding Annual Session," and substituting the words, "by the Board of Trustees"; and by the addition of the words, "if possible" after "East Tennessee."

Section 1: "The Association shall hold an Annual Meeting beginning on Monday preceding the second Tuesday in April, and at such place as has been fixed **by the Board of Trustees**, but it is agreed that the meeting shall rotate annually to Middle, West, and East Tennessee **if possible.**

The Reference Committee recommended adoption of Amendment No. 1 to the By-Laws.

ACTION: **ADOPTED**

Amendment to By-Laws—No. 2

Be it resolved that Section 2 of Chapter IV of the By-Laws be amended by adding at the end of Section 2 the following additional sentence:

"Section 2: Each component Society shall be entitled to send to the House of Delegates each year one delegate for every fifty active and veteran members and one for every fraction thereof, based upon the number of such members in the component Society in good standing as of December 1 of the year preceding the session of the House. Each component Society holding a charter from the Association, which has made its annual report and paid its assessment as provided in the Constitution and By-Laws, shall be entitled to at least one delegate. No delegate from any chartered component medical society shall be entitled to be seated in the House of Delegates unless the component medical society which he represents has complied with the requirements of the Association by submitting the report to the Councilor of the District in which the component society is located. **'Each delegate of a component society shall be a proxy representing all of the members of his component society, except as to matters upon which a referendum is held as privided in Article XI of the Constitution, and the meeting of the House of Delegates shall constitute the annual meeting of the members of the Association in accordance with the requirements of the law of the State of Tennessee relating to general welfare corporations."**

The Reference Committee recommended adoption of Amendment No. 2 to the By-Laws.

ACTION: **ADOPTED**

The report of the Reference Committee on Amendments to the Constitution and By-Laws was adopted as a whole.

(THE CONSTITUTION AND BY-LAWS INCLUDED IN THIS ISSUE OF THE JOURNAL INCLUDES ALL AMENDMENTS TO DATE.)

Report of Reference Committee on Resolutions

A. ROY TYRER, M.D., Chairman

RESOLUTION NO. 1-64

Incorporation of Tennessee Medical Association

By: ROBERT M. FINKS, M.D., Chairman, Board of Trustees

WHEREAS, the Board of Trustees of The Tennessee Medical Association at a meeting held on January 12, 1964 considered the question of whether the Association should remain an unincorporated association or should be chartered as a general welfare corporation under the laws of the State of Tennessee; and

WHEREAS, after discussing the matter with counsel and considering counsel's written opinion, the Board of Trustees voted unanimously to recommend to the House of Delegates that the Association be incorporated; and,

WHEREAS, a study made by the American Medical Association reveals that forty-four State Medical organizations are incorporated and that the consensus is that the corporate form of organization is preferable to an unincorporated association; and,

WHEREAS, it further appears that the tax

exempt status of the Association would not be affected by incorporation so long as the purposes of the organization remain the same;

NOW, THEREFORE, BE IT RESOLVED BY THE HOUSE OF DELEGATES OF THE TENNESSEE MEDICAL ASSOCIATION, That the action of the Board of Trustees in recommending incorporation is approved, ratified and confirmed, and that the officers and/or Trustees of the Association are hereby authorized and directed to take such steps as may be necessary to incorporate the Association under the laws of Tennessee relating to general welfare corporations; provided, however, that there shall be no change in the purposes of the Association as set forth in the present Constitution and By-Laws; and,

BE IT FURTHER RESOLVED, That the officers and/or Trustees of the Association are expressly authorized to transfer all property of the Association, including real property, to the proposed corporation after it has been chartered; and,

BE IT FURTHER RESOLVED, That upon incorporation and the transfer of the properties of the Association to the corporation, the voluntary unincorporated Association known as Tennessee Medical Association shall cease to exist.

The Reference Committee on Resolutions recommended adoption of Resolution No. 1.

ACTION: **ADOPTED**

RESOLUTION NO. 2-64

Tuberculosis Eradication Program of the Tennessee Department of Public Health

By: Wm. A. Hensley, M.D., Chairman, Liaison Committee to Public Health Department

WHEREAS, at the meeting of the Tennessee Public Health Council on November 20th, an official communication was presented from the Maury County Medical Society requesting the State Health Department to discontinue its present policy of recommending treatment for tuberculosis until the matter was endorsed or disapproved by the Tennessee Medical Association; and

WHEREAS, the Public Health Council adopted a motion approving the Division of Tuberculosis Control Program aimed at eradication of tuberculosis, requesting the TMA Liaison Committee to the Public Health Department to present an appropriate resolution to the House of Delegates on this subject; and

WHEREAS, at the request of the Chairman of the Liaison Committee to the Public Health Department, the Board of Trustees of TMA reactivated the Committee on Tuberculosis in order that the committee could analyze the problem and make recommendations to the Chairman of the Liaison Committee to the Public Health Department; and

WHEREAS, the TMA Tuberculosis Committee met on February 22nd for the purpose of analyzing the tuberculosis program of the State Public Health Department; and

WHEREAS, it was the opinion of the committee that an administrative breakdown had caused much of the dissention about the program; and

WHEREAS, it was further agreed that no patient should be treated by the Public Health Department without first referring the patient to his private physician; and

WHEREAS, it was the opinion of the TMA Committee on Tuberculosis that information forwarded to physicians of the State about the program should be rewritten to correct some of the misunderstanding on the part of physicians of the State; and

WHEREAS, the Committee on Tuberculosis made specific recommendations to the Liaison Committee to the Public Health Department for presentation to the House of Delegates as contained in the resolves of this resolution; now therefore be it

RESOLVED, That the tuberculosis eradication program, officially designated as the Tuberculosis Field Service Program be approved with the following exceptions:

Section 9, Chemotherapeutic Guide for Out-Patients, Item C No. 4:

The language be omitted which reads—"Individuals with severe tuberculin reactions when clinical judgment indicates advisability"—and replace this with the language—"In adults the mere presence of a tuberculin reaction, if it is not known when the conversion occurred, it is not usually regarded as requiring treatment. A possible exception of this statement is the florid reaction, e.g., fifteen to twenty millimeters of induration to a small or intermediate dose of tuberculin.";

and be it further

RESOLVED, That Section 9, Item D be retained which reads: "Recommended daily dosage of Isoniazid (100 mgm. tablets)"; and be it further

RESOLVED, That Section 9, Item E be omitted which reads:

"Problem of Drug Resistant Organisms: (1) In every tuberculosis control program, such as this one, the question of the development of drug resistant Tubercle Bacilli usually arises. This is a problem that cannot be ignored but, at the same time, it must be kept in proper perspective and dealt with on a realistic basis. (2) In patients for whom home treatment should be recommended, it is believed that the risk of developing resistant tuberculosis germs is too small to justify withholding treatment from the large number of individuals who stand to derive great benefit from such treatment.";

and be it further

RESOLVED, That the following recommendation be added to read:

"The toxic reaction to I.N.H. should be listed when recommendations for treatment are made and supplied to the private physician. (For the prevention of neurologic complications, pyridoxine has been found helpful.)";

and be it further

RESOLVED, That no patient be placed on chemoprophylactic medication before consultation between the private physician and the Public Health Department. In the event of a difference of opinion, the opinion of an additional mutually acceptable physician shall be obtained. If the patient states he has no private physician and is indigent, the Public Health Department shall follow through with the case.

The Reference Committee on Resolutions recommended a substitute resolution, as follows:

SUBSTITUTE RESOLUTION NO. 2-64

Tuberculosis Eradication Program of the Tennessee Department of Public Health

WHEREAS, the Tuberculosis Eradication Program of the Tennessee Department of Public Health, officially designated the Tuberculosis Field Service Program, is desirable and approved in principle by the Tennessee Medical Association; now therefore be it

RESOLVED, That the Tennessee Department of Public Health continue this program, working in

close cooperation with recommendations made by the Tennessee Medical Association's Committee on Tuberculosis; and be it further

RESOLVED, That indigent patients coming under this program be followed and treated by the Department of Public Health, and non-indigent patients be referred to their private physician for care and treatment.

ACTION: **ADOPTED**

RESOLUTION NO. 3-64

Crippled Children's Service Program in Tennessee

By: Wm. A. Hensley, M.D., Chairman, Liaison Committee to Public Health Department

WHEREAS, at the meeting of the Public Health Council of the State of Tennessee on November 20th, there were discussions regarding discrepancies of fees involved in the Crippled Children's Service—some physicians working for an honorarium and some working on a fee for service basis—which has led to problems among the specialty groups; and

WHEREAS, a motion of the Public Health Council has been adopted requesting the Liaison Committee from the Tennessee Medical Association to present this issue to the House of Delegates in the form of a resolution; and

WHEREAS, the Public Health Council recommended that the resolution contain a positive recommendation that the physicians of Tennessee look on this problem just as they do other indigent medical care problems that all of the doctors of Tennessee are faced with daily; and

WHEREAS, it was further recommended that the services performed by the specialty groups in the field of Crippled Children's Service be performed by those who elect to participate in this program at no cost to the State for professional service; now therefore be it

RESOLVED, That if these recommendations by the Public Health Council are not acceptable, it is recommended that this House of Delegates assume the responsibility for making specific recommendations to the Public Health Council in this matter.

It was the opinion of the Reference Committee that the adjudication of fees for professional services rendered in conjunction with the Crippled Children's Service does not come within the jurisdiction nor province of responsibility of the TMA House of Delegates and should be adjudicated by the Public Health Council working in cooperation with TMA's Liaison Committee to the Public Health Department. **The Committee recommended that no action be taken on this resolution.**

By official action, the recommendation of the Committee that no action be taken on Resolution No. 3-64, was approved.

RESOLUTION NO. 4-64 was withdrawn and not introduced in the House of Delegates.

RESOLUTION NO. 5-64

Recommendations for Expansion of the Medical Aid For The Aged Program

By: Kenneth M. Kressenberg, M.D., Chairman, Committee for Implementation and Expansion of Kerr-Mills

WHEREAS, the Tennessee Medical Association has, in many ways, been instrumental in the establishment of an effective Medical Aid for the Aged program in Tennessee, and

WHEREAS, the program has been expanded or broadened five times in less than three years of its existence, so as to afford needy citizens of Tennessee age 65 and over more and better medical services under the program, and

WHEREAS, the increases have been substantial during 1963, the second full year of operation, both in number of recipients and services provided, and

WHEREAS, this House of Delegates did, in 1963, by resolution establish a committee for implementation and expansion of the Kerr-Mills law in Tennessee, NOW THEREFORE BE IT

RESOLVED, That the Tennessee Medical Association reaffirm its endorsement and support of the Medical Aid for the Aged program in Tennessee and seek further expansions and improvements of the services provided, AND BE IT FURTHER

RESOLVED, That this House of Delegates go on record as favoring further expansion of the income limits within the program so as to include more potential recipients, AND BE IT FURTHER

RESOLVED, That this House of Delegates favor increasing the days of hospitalization allowed in one fiscal year under the program to a total of 30 days as is now in effect in the Old Age Assistance program, AND BE IT FURTHER

RESOLVED, That the process of precertification of eligible applicants be continued so as to avoid unnecessary delay at the time of need, AND BE IT FURTHER

RESOLVED, That the Committee for Implementation and Expansion of Kerr-Mills be instructed to convey the contents of this resolution to the Commissioner of Public Welfare and urge his consideration for implementation of the recommendations so contained, AND BE IT FURTHER

RESOLVED, That the same be done by the Consultative Committee to the Governor, urging his continued support and assistance in effecting these recommendations.

The Reference Committee recommended that the first two 'Resolveds' be restated and that a third 'Resolved' be added. **The Committee recommended that the following Amended Resolution No. 5-64 be adopted.**

AMENDED RESOLUTION NO. 5-64

Recommendations for Expansion of the Medical Aid For The Aged Program

WHEREAS, the Tennessee Medical Association has, in many ways, been instrumental in the establishment of an effective Medical Aid for the Aged program in Tennessee, and

WHEREAS, the program has been expanded or broadened five times in less than three years of its existence, so as to afford needy citizens of Tennessee age 65 and over more and better medical services under the program, and

WHEREAS, the increases have been substantial during 1963, the second full year of operation, both in number of recipients and services provided, and

WHEREAS, this House of Delegates did, in 1963, by resolution establish a committee for implementation and expansion of the Kerr-Mills law in Tennessee, NOW THEREFORE BE IT

RESOLVED, That the Tennessee Medical Association reaffirm its endorsement and support of the Medical Aid for the Aged Program in Tennessee, AND BE IT FURTHER

RESOLVED, That the Tennessee Medical Association express appreciation to the administration of the State of Tennessee for its interest and cooperation in expanding and implementing the Medical Aid for the Aged Program, AND BE IT FURTHER

RESOLVED, That this House of Delegates go on record as favoring further expansion of the income limits within the program, AND BE IT FURTHER

RESOLVED, That this House of Delegates favor increasing the days of hospitalization allowed in one fiscal year under the program to a total of 30 days as is now in effect in the Old Age Assistance program, AND BE IT FURTHER

RESOLVED, That the process of precertification of eligible applicants be continued so as to avoid unnecessary delay at the time of need, AND BE IT FURTHER

RESOLVED, That the Committee for Implementation and Expansion of Kerr-Mills be instructed to convey the contents of this resolution to the Commissioner of Public Welfare and urge his consideration for implementation of the recommendations so contained, AND BE IT FURTHER

RESOLVED, That the same be done by the Consultative Committee to the Governor, urging his continued support and assistance in effecting these recommendations.

ACTION: **ADOPTED**

RESOLUTION NO. 6-64 was withdrawn and not introduced to the House of Delegates.

RESOLUTION NO. 7-64

Regulation of Medical Laboratories

By: Tom E. Nesbitt, M.D., Chairman
Legislative and Public Policy Committee

WHEREAS, a medical laboratory is any facility which through its operation employs methods and equipment to examine tissues, fluids, secretions and excretions of the human body for the purpose of detecting or diagnosing disease, to follow its course, or to aid in its treatment, and

WHEREAS, the efficiency and accuracy of a medical laboratory are dependent upon adequate supervision and the skill and training of its personnel, NOW THEREFORE BE IT

RESOLVED, That the operation of a medical laboratory as defined represents the practice of medicine, AND BE IT FURTHER

RESOLVED, That the Tennessee Medical Association adopt the principle that a medical laboratory should be actively supervised and directed by a licensed physician, AND BE IT FURTHER

RESOLVED, That the patronization of laboratories which do not meet this requirement shall constitute the unethical practice of medicine, AND BE IT FURTHER

RESOLVED, That the Tennessee Medical Association oppose the licensure of medical laboratories on the basis that:

a. The standard of medical laboratories directed by licensed physicians in Tennessee is good;
b. Licensure per se would not assure quality and, in fact, could give status to substandard laboratories;
c. Improvement of properly directed medical laboratories can be achieved best by internal quality control measures within the medical profession.

The Reference Committee on Resolutions recommended adoption of Resolution No. 7-64.

ACTION: **ADOPTED**

RESOLUTION NO. 8-64

Regulation of Blood Banks

By: Tom E. Nesbitt, M.D., Chairman
Legislative and Public Policy Committee

WHEREAS, a blood bank is any facility whose purpose is to collect, process, store, distribute, or administer human blood and/or its derivatives, and

WHEREAS, the efficiency and reliability of a blood bank are dependent upon adequate supervision and the skill and training of its personnel, NOW THEREFORE BE IT

RESOLVED, That a blood bank as defined above represents a limited form of medical laboratory, subject to all provisions relating thereto, AND BE IT FURTHER

RESOLVED, That the Tennessee Medical Association encourage all blood banks to seek voluntary accreditation by the American Association of Blood Banks unless by their nature they are required to be licensed by the National Institutes of Health, AND BE IT FURTHER

RESOLVED, That the Tennessee Medical Association oppose the licensure of blood banks on the basis that:

a. The quality of blood banks directed by licensed physicians in Tennessee is good and is constantly being improved by existing voluntary organizations;
b. Licensure per se would not assure quality and, in fact, could give status to substandard blood banks;
c. Improvement of properly directed blood banks can be achieved best by internal quality control measures within the medical profession.

The Reference Committee recommended adoption of Resolution No. 8-64.

ACTION: **ADOPTED**

RESOLUTION NO. 9-64

Regulations Regarding Training and Education of Medical Technicians and Laboratory Assistants

By: Tom E. Nesbitt, M.D., Chairman
Legislative and Public Policy Committee

WHEREAS, in Tennessee and throughout the nation there is a shortage of well qualified medical laboratory technicians, and

WHEREAS, in Tennessee there are nineteen schools approved by the American Medical Association Council on Medical Education and Hospitals for the training of medical technicians, which are operating at approximately 50% of capacity, and

WHEREAS, there is but one approved school for the recently developed program for training

Certified Laboratory Assistants, NOW THEREFORE BE IT

RESOLVED, That the Tennessee Medical Association take immediate recruitment steps to bring these approved schools up to full capacity, AND BE IT FURTHER

RESOLVED, That the Tennessee Medical Association take immediate steps to encourage the establishment of more approved schools for the training of Certified Laboratory Assistants, AND BE IT FURTHER

RESOLVED, That financial support for both of these categories of approved schools for medical technicians and laboratory assistants be sought from the Tennessee Department of Education and other appropriate sources, so that the lack of finances will not be a deterrent to their operation at full capacity or to their expansion, and so that the operation of the schools will not constitute a financial drain on the hospitals with which they are associated.

The Reference Committee recommended adoption of Resolution No. 9-64.

ACTION: **ADOPTED**

RESOLUTION NO. 10-64

Amendment to Medical Practice Act

By: Tom E. Nesbitt, M.D., Chairman
Legislative and Public Policy Committee

WHEREAS, medical laboratories are essential to the practice of medicine, in the early detection, diagnosis and treatment of human disease, and

WHEREAS, legal counsel to the Tennessee Medical Association has expressed opinion that the Medical Practice Act, TCA 63-608, in its present form does not clearly include individuals operating medical laboratories, or blood banks, NOW THEREFORE BE IT

RESOLVED, That the Tennessee Medical Association recognize that the operation of a medical laboratory or blood bank constitutes the practice of medicine, AND BE IT FURTHER

RESOLVED, On the advice of counsel to the Tennessee Medical Association that TMA's Public Policy and Legislative Committee recommend to the Tennessee State Legislature that Section 63-608 of Tennessee Code Annotated be amended by striking out the said section in its entirety and substituting in lieu thereof the following (the added words are in capitals—there are no deletions):

"Any person shall be regarded as practicing medicine within the meaning of this chapter who shall DIAGNOSE OR PROFESS TO DIAGNOSE, OR PERFORM LABORATORY EXAMINATIONS TO AID IN THE DIAGNOSIS OR DETECTION OF DISEASE, treat, or profess to treat, operate on, or prescribe for any physical ailment or any physical injury to or deformity of another; provided that nothing in this section shall be construed to apply to the administration of domestic or family remedies in cases of emergency, or to the laws regulating the practice of dentistry; and this chapter shall not apply to surgeons of the United States army, navy, air force, or marine hospital service, or to any registered physician or surgeon of other States when called in consultation by a registered physician of this State, OR TO PERSONNEL EMPLOYED TO PERFORM LABORATORY EXAMINATIONS BY A LICENSED PHYSICIAN IN HIS PLACE OF PRACTICE OR TO PERSONNEL EMPLOYED IN A LICENSED HOSPITAL UNDER THE SUPERVISION OF A LICENSED PHYSICIAN TO PERFORM SUCH EXAMINATIONS, or to midwives, or to veterinary surgeons, or to osteopaths, or chiropractors not giving or using medicine in their practice, or to opticians, optometrists, chiropodists or to Christian Scientists."

The Reference Committee recommended a minor alteration in the last 'Resolved.'

The Committee recommended adoption of the following amended Resolution No. 10-64.

AMENDED RESOLUTION NO. 10-64

Amendment to Medical Practice Act

WHEREAS, medical laboratories are essential to the practice of medicine, in the early detection, diagnosis and treatment of human disease, and,

WHEREAS, legal counsel to the Tennessee Medical Association has expressed opinion that the Medical Practice Act, TCA 63-608, in its present form does not clearly include individuals operating medical laboratories, or blood banks, NOW THEREFORE BE IT

RESOLVED, That the Tennessee Medical Association recognize that the operation of a medical laboratory or blood bank constitutes the practice of medicine, AND BE IT FURTHER

RESOLVED, On the advice of counsel to the Tennessee Medical Association that TMA's Public Policy and Legislative Committee recommend to the Tennessee State Legislature that Section 63-608 of Tennessee Code Annotated be amended by striking out the said section in its entirety and substituting in lieu thereof the following:

"Any person shall be regarded as practicing medicine within the meaning of this chapter who shall diagnose or profess to diagnose, or perform laboratory examinations to aid in the diagnosis or detection of disease, treat, or profess to treat, operate on, or prescribe for any physical ailment or any physical injury to or deformity of another; provided that nothing in this section shall be construed to apply to the administration of domestic or family remedies in cases of emergency, or to the laws regulating the practice of dentistry; and this chapter shall not apply to surgeons of the United States army, navy, air force, Veterans Administration, or U. S. Public Health Service, or to any registered physician or surgeon of other States when called in consultation by a registered physician of this State, or to personnel employed to perform laboratory examinations by a licensed physician in his place of practice or to personnel employed in a licensed hospital under the supervision of a licensed physician to perform such examinations, or to midwives, or to veterinary surgeons, or to osteopaths, or chiropractors not giving or using medicine in their practice, or to opticians, optometrists, chiropodists or to Christian Scientists."

ACTION: **ADOPTED**

RESOLUTION NO. 11-64

Implementation of Resolution 68 Passed By The American Medical Association House of Delegates, June 19, 1963

By: David P. McCallie, M.D., Chattanooga

WHEREAS, the American Medical Association in session assembled took additional recognition of the "importance of the general practitioner as an essential component of American medicine"; and

WHEREAS, once again recognition was taken of the need for "an adequate number of medical school graduates selecting general practice for their medical careers"; and

WHEREAS, the AMA House did resolve to "instruct its Board of Trustees to utilize all facilities at its command to:

A) inform the medical schools of the shortage of general practitioners, and request their cooperation in exposing medical students to general practice by lectures, preceptor programs, and clinical instructors who are practicing general practitioners, and

B) inform the constituent state medical associations of the need to emphasize general practice training and to ask these associations' members to encourage students to go into general practice"; now therefore be it

RESOLVED, That the Tennessee Medical Association likewise take cognizance of this problem and instruct our State Board of Trustees to utilize all facilities at its command with deliberate speed to implement the intent of Resolution 68 passed by the AMA House of Delegates; and be it further

RESOLVED, That the TMA Board of Trustees report back to the 1965 House of Delegates what actions have been taken in the State of Tennessee and what progress has been made in solution of this serious problem facing the American public, namely, the impending critical shortage of general practitioners to serve the public.

The Reference Committee recommended adoption of Resolution No. 11-64.

ACTION: **ADOPTED**

RESOLUTION NO. 12-64

Extern-Intern-and Resident Affairs of the Hospital Committee of the Memphis-Shelby County Medical Society

By: Shelby County Delegation

WHEREAS, the number of signatures required of the attending physician recently on hospital charts has become voluminous, meaningless, and impractical, particularly the countersigning of house officers' histories and physical examinations and progress notes; therefore be it

RESOLVED, That the Tennessee Medical Association recommend that the responsible physician countersign all orders, operative notes, consultations or special studies on hospital charts, but that one signature of the physician in charge of the case shall suffice to authenticate the rest of the record; and be it further

RESOLVED, That the delegates from this Association to the American Medical Association be instructed to introduce a similar resolution in the House of Delegates of that body.

The Reference Committee referred to the report of the AMA Committee to study the operation of the Joint Commission on Accreditation of Hospitals, page 413, the Handbook of the AMA House of Delegates, June 17-20, 1963, which reads: "Your Committee has given due consideration to the number of signatures required by the Joint Commission on Accreditation of Hospitals on histories, physical examinations, operative reports, progress notes, drugs and other orders and summaries. It is the feeling of your Committee that the Joint Commission on Accreditation of Hospital Standards relating to signatures on hospital records have been reduced to an irreducible minimum consistent with good patient care and that rules and regulations of the Joint Commission relating to signatures are realistic and should be complied with."

In view of the recent consideration by the AMA on the subject and the opinion rendered, **the Reference Committee recommended that Resolution No. 12-64 not be approved.**

ACTION: **The House of Delegates rejected Resolution 12-64.**

RESOLUTION NO. 13-64

The Relationship Between Anesthesiologists and Certain Insurance Carriers

By: Shelby County Delegation

WHEREAS, certain insurance carriers pay benefits for anesthesia when administered by a hospital employee, but pay either token or no benefits for anesthesia when administered by a privately practicing anesthesiologist; and

WHEREAS, such policy is coercive towards the patient and the attending surgeon, its tendency to increase the use of the hospital employed anesthetist and to reduce the use of privately practicing anesthesiologists; and

WHEREAS, such policy tends to artificially decrease the demands for anesthesiologists, since no hospital in this area has enough privately practicing anesthesiologists to meet the anesthesia needs of the hospital, and

WHEREAS, such a policy is arbitrary, capricious and discriminatory against the medical specialty of Anesthesiology, which is an established, constructive medical specialty which has contributed to a significant degree to recent advances in the practice of medicine and has especially assisted in the development and popularization of improved surgical techniques in recent years, now therefore be it

RESOLVED, That the Memphis and Shelby County Medical Society is of the opinion that anesthesia benefits purchased by the patient or by his agent should be paid on behalf of the patient to the private practicing anesthesiologists of the patient's choice, and be it further

RESOLVED, That the Memphis and Shelby County Medical Society shall make this action known to the local health insurance council, the local Blue Cross, (and/or Blue Cross Surgical Plan, and/or Blue Shield), and such other insurance carriers as may operate in this community and be it further

RESOLVED, That the Executive Committee of this Society shall introduce appropriate resolutions to the Tennessee Medical Association and to the American Medical Association so that the sense of this resolution may become a statement of policy of the physicians of Tennessee and of the United States of America.

The Reference Committee on Resolutions recommended a substitute resolution, as follows:

SUBSTITUTE RESOLUTION NO. 13-64

The Relationship Between Anesthesiologists and Certain Insurance Carriers

WHEREAS, certain insurance carriers pay benefits for anesthesia when administered by a hospital employee, but pay either token or no benefits when administered by a privately practicing anesthesiologist; and

WHEREAS, such policy limits the benefits that the patient is entitled to, and is coercive towards the patient and the attending surgeon in its tendency to increase the use of the hospital employed anesthetist and to reduce the use of privately practicing anesthesiologists; and

WHEREAS, such a policy is arbitrary, capricious, and discriminatory against the medical specialty of anesthesiology, which is an established medical specialty that has contributed significantly to recent advances in the practice of medicine and has assisted in the development of improved surgical techniques; now therefore be it

RESOLVED, That the Tennessee Medical Association is of the opinion that anesthesia benefits purchased by the patient or by his agent should be paid on behalf of the patient to the private practicing anesthesiologist when said service is rendered by him, and be it further

RESOLVED, That the Tennessee Medical Association shall make this action known to the Health Insurance Council, to Memphis Blue Cross, the Tennessee Hospital Service Association, Blue Cross and Blue Shield, and such other insurance carriers as may operate in this state, and shall instruct the TMA's Health Insurance Committee to continue in its negotiations to effect a change in these unfair policies.

ACTION: **ADOPTED**

RESOLUTION NO. 14-64

Authentication of Hospital Records

By: Robert M. Miles, M.D., Chairman

WHEREAS, it has come to the attention of the Committee on Hospitals that the number of signatures required on hospital charts has become voluminous, meaningless and ridiculous, be it therefore

RESOLVED, That it be acceptable for a hospital chart to be authenticated by one signature of the physician in charge of the case together with signatures relative to consultation and special clinical studies (example: pathological, radiological, surgical, etc.) It is requested that this resolution be transmitted through proper channels to the American Medical Association and the Joint Commission on Accreditation of Hospitals for their consideration.

The Reference Committee recommended that this resolution be disapproved for the same reasons as expressed in relation to Resolution No. 12-64.

ACTION: **REJECTED**

RESOLUTION NO. 15-64

Independent Medicine's Political Action Committee—Tennessee

By: B. G. Mitchell, M.D., Chairman

WHEREAS, the American Medical Association, recognizing that effective political action on the part of the medical profession is a necessary and proper activity to help preserve the free enterprise system of this nation did, in 1961, establish the American Medical Political Action Committee, and,

WHEREAS, the Tennessee Medical Association, through its House of Delegates, did in 1962, endorse the creation of a medical political action committee in Tennessee, resulting in the establishment of Independent Medicine's Political Action Committee—Tennessee (IMPACT), with the Board of Directors appointed by the Board of Trustees of the Tennessee Medical Association, and

WHEREAS, IMPACT, has been seriously hampered in its operation having received no financial or staff support in its educational activities from the Tennessee Medical Association, and

WHEREAS, the American Medical Association as well as numerous state medical societies have established precedent by providing financial support and staff to their medical political action committee for education purposes, and

WHEREAS, our legal counsel has stated that it is legal for Tennessee Medical Association to appropriate funds for IMPACT's educational activities; now therefore be it

RESOLVED, That the House of Delegates of the Tennessee Medical Association reaffirm its endorsement of IMPACT and encourage all members as individual physicians to join and support this movement, both with time and financial support, and be it further

RESOLVED, That the House of Delegates requests the Board of Trustees of the Tennessee Medical Association to allocate financial support to IMPACT's educational fund for its educational program, and that a yearly appropriation be made based upon specific requests submitted to the Board of Trustees by the Chairman of the Board of Directors of IMPACT; and be it further

RESOLVED, That each member of this House of Delegates take it upon himself as an individual to assist IMPACT in recruitment, membership and other supportive measures which can legally be performed as individual members.

The Reference Committee recommended adoption of Resolution No. 15-64 with minor changes, namely, by deleting the words "chairman of the" in the second resolved, and by changing the word "legally" to "properly" in the third resolved.

AMENDED RESOLUTION NO. 15-64

Independent Medicine's Political Action Committee—Tennessee

WHEREAS, the American Medical Association, recognizing that effective political action on the part of the medical profession is a necessary and proper activity to help preserve the free enterprise system of this nation did, in 1961, establish the American Medical Political Action Committee, and,

WHEREAS, the Tennessee Medical Association, through its House of Delegates, did in 1962, endorse the creation of a medical political action committee in Tennessee, resulting in the establishment of Independent Medicine's Political Action Committee—Tennessee (IMPACT), with the Board of Directors appointed by the Board of Trustees of the Tennessee Medical Association, and

WHEREAS, IMPACT, has been seriously hampered in its operation having received no financial or staff support in its educational activities from the Tennessee Medical Association, and

WHEREAS, the American Medical Association as well as numerous state medical societies have established precedent by providing financial support and staff to their medical political action committee for education purposes, and

WHEREAS, our legal counsel has stated that it is legal for Tennessee Medical Association to appropriate funds for IMPACT's educational activities; now therefore be it

RESOLVED, That the House of Delegates of the Tennessee Medical Association reaffirm its endorsement of IMPACT and encourage all members as individual physicians to join and support this movement, both with time and financial support, and be it further

RESOLVED, That the House of Delegates requests the Board of Trustees of the Tennessee Medical Association to allocate financial support to IMPACT's educational fund for its educational program, and that a yearly appropriation be made based upon specific requests submitted to the Board of Trustees by the Board of Directors of IMPACT; and be it further

RESOLVED, That each member of this House of Delegates take it upon himself as an individual to assist IMPACT in recruitment, membership and other supportive measures which can properly be performed as individual members.

ACTION: **ADOPTED**

RESOLUTION NO. 16-64

Educational Program of the Medical Assistants Society of Tennessee

By: Harmon L. Monroe, M.D.

WHEREAS, we have a strong State Chapter of Medical Assistants Society in Tennessee, and

WHEREAS, we recognize the importance of the efficiency of our office assistants in our everyday practice of medicine, and

WHEREAS, our office assistants are exerting great effort to become more proficient in their professional duties by establishing courses in public relations, office accounting, examining room procedures, etc., leading to certification by the National Society of Medical Assistants; and

WHEREAS, certain colleges and universities have expressed interest in teaching such courses, and desire the approval of TMA before proceeding; now therefore be it

RESOLVED, That the members of the Tennessee Medical Association in annual session endorse the efforts of the Tennessee Chapter of the Medical Assistants Society and encourage them to participate in such courses to be given by the various universities and colleges throughout the state when so arranged by the Medical Assistants Society of Tennessee.

The Reference Committee recommended adoption of Resolution No. 16-64.

ACTION: **ADOPTED**

RESOLUTION NO. 17-64

Nominees to Fill Vacancies on Medical Section of Board of Directors of Tennessee Hospital Service Association

By: Davidson County Delegation

WHEREAS, the President of the Tennessee Medical Association has received a letter from the Chairman of the Board of Directors of the Tennessee Hospital Service Association, inviting the Tennessee Medical Association to submit annually a list of nominees to fill vacancies which will occur on the Medical Section of the Board of Directors of the Tennessee Hospital Service Association; now therefore be it

RESOLVED, That the House of Delegates does hereby instruct the Nominating Committee to submit annually to the House of Delegates a list of five such nominees chosen with due consideration of the suggestions made in the above-mentioned letter (which letter is hereby made a part of the minutes of this House of Delegates); and that after consideration by the House of Delegates the slate of five elected nominees will be conveyed to the Chairman of the Board of the T.H.S.A.; and be it further

RESOLVED, That those individuals who have been nominated by the TMA and elected as Trustees of the THSA shall be invited to report annually to the House of Delegates of TMA on the problems and progress of the Blue Shield Plan in Tennessee.

The Reference Committee on Resolutions recommended adoption of Resolution No. 17-64.

ACTION: **ADOPTED**

RESOLUTION NO. 18-64

Implementation of Kerr-Mills Program

By: C. D. Hawkes, M.D.

WHEREAS, the best medical care and services can be given the American public through the free enterprise system, and

WHEREAS, the Kerr-Mills Bill has provided an effective measure to provide such services to those senior citizens in need of assistance in obtaining them, and

WHEREAS, the full cooperation of the medical and para-medical groups is necessary to assure success of this program; now therefore be it

RESOLVED, That the Tennessee Medical Association urge the Tennessee Hospital Association to adopt a policy of full support of the Kerr-Mills Program; and be it further

RESOLVED, That the Tennessee Hospital Association be requested to publicize this policy to the benefit of the citizens needing its assistance; and be it further

RESOLVED, That a copy of this resolution be transmitted to the Tennessee Hospital Association for its consideration and action.

The Reference Committee recommended adoption of Resolution No. 18-64.

ACTION: **ADOPTED**

RESOLUTION NO. 19-64

Implementation of Kerr-Mills Program

By: C. D. Hawkes, M.D.

WHEREAS, the best medical care and services can be given the American public through the free enterprise system, and

WHEREAS, the Kerr-Mills Bill has provided an effective measure to provide such services to those senior citizens in need of assistance in obtaining them, and

WHEREAS, the full cooperation of the medical and para-medical groups is necessary to assure success of this program; now therefore be it

RESOLVED, That the Tennessee Medical Association urge the Tennessee Pharmaceutical Association to adopt a policy of full support of the Kerr-Mills Program; and be it further

RESOLVED, That the Tennessee Pharmaceuti-

cal Association be requested to publicize this policy to its membership so that the fullest use of the program may be accomplished in this state to the benefit of the citizens needing its assistance; and be it further

RESOLVED, That a copy of this resolution be transmitted to the Tennessee Pharmaceutical Association for its consideration and action.

The Reference Committee recommended adoption of Resolution No. 19-64.

ACTION: **ADOPTED**

RESOLUTION NO. 20-64, prepared for presentation, was not introduced in the House of Delegates.

RESOLUTION NO. 21-64

Introduction of Resolutions to TMA

By: Reference Committee on Resolutions

WHEREAS, ample time for study and consideration of each resolution introduced to TMA is in the best interest of the organization and its constituents; now therefore be it

RESOLVED, That every effort be made to submit all resolutions to the Executive Secretary of TMA at least two weeks in advance of the date they are to be considered, and preferably four weeks in advance of stated date; and be it further

RESOLVED, That no resolutions shall be introduced on the day of the final session of the House of Delegates except such resolutions as are emergent in nature, subject to unanimous approval of the House of Delegates.

ACTION: **ADOPTED**

The Report of the Reference Committee on Resolutions was adopted as a whole.

Report of Reference Committee on Reports of Officers

Lamb B. Myhr, M.D., Chairman

Report of the President

"This detailed report was carefully reviewed and we feel that it shows sound judgment and positive approach to all groups, lay and professional, and reflects the tremendous amount of time spent and devotion to duty by our President. He is to be commended for his astute handling of a most difficult situation occasioned by an attack by a portion of the press in Nashville on the Tennessee Medical Association. The activities of the year's work in our Medical Association are covered in this report and we urge each member to read in detail this most excellent report.

"Mr. Speaker, the Reference Committee on Reports of Officers moves that Dr. Cannon's report be adopted."

ACTION: **ADOPTED**

Report of the Secretary

"Our Committee reviewed this concise report and it was accepted as written. Mr. Speaker, we move the adoption of this report.

ACTION: **ADOPTED**

Report of the Board of Trustees

"Our Committee has reviewed this excellent report of Dr. Robert Finks covering the activities of the Board of Trustees for 1963. We wish to commend Dr. Finks and all of the members of the Board of Trustees for their diligent, effective, and efficient handling of the affairs of the TMA. The report of the Treasurer which is attached to the Board of Trustees report, shows sound financial judgment and a sense of fiscal responsibility of the TMA. We agree that if the present decrease in revenue from Journal Advertisement continues, another source of revenue must be found. We urge each of the delegates to read carefully this report and the financial statement attached. We would like to express our appreciation for the astute way in which the business end of our State Association is managed.

"Mr. Speaker, the Reference Committee on Reports of Officers moves the adoption of this report."

ACTION: **ADOPTED**

Report of the Council

"Our Committee feels that the members of the Council have a most difficult job. We commend the Council for their excellent work on many controversial issues. Two major problems confront the Council at the present time and each member of the House of Delegates should thoroughly study the details of these problems as outlined in this excellent report by Dr. Francis Cole. One of the delegates, with the approval of the Chairman of the Council, suggested deletion of the fourth sentence, paragraph 5, page 3 of the Report of the Council and substituting the following: 'The Council requests this House of Delegates to instruct the Health Insurance Committee, the Committee on Hospitals and our representatives to the Liaison Committee known as the Three-P to immediately institute measures to seek changes in health insurance policies to provide radiology and pathology under

professional care rather than under hospital services.'

"Mr. Speaker, with the substitution of the above sentence, the Committee recommends the acceptance of this report and so move."
ACTION: **ADOPTED**

Report of the Executive Director

"The Reference Committee wishes to commend Mr. Ballentine again for his excellent report covering the administrative activities of the TMA. This report speaks for itself and the committee would again like to suggest that this annual report of the Executive Director be published in the JOURNAL of TMA. The Committee would like to inform the House of Delegates of the fact that Mr. Ballentine is on the National Advisory Committee on Communications and Public Relations to the American Medical Association and in this capacity has shown evidence of personal growth and contributions to the national medical scene.

"Mr. Speaker, the Committee moves that this report be adopted."
ACTION: **ADOPTED**

The Report of the Reference Committee on Reports of Officers was adopted as a whole.

Report of Reference Committee on Reports of Standing Committees

DAVID R. PICKENS, JR., M.D., Chairman

The Reference Committee moved the adoption of reports of the following Standing Committees:

1. Committee on Scientific Work and Postgraduate Education—Editorial Board
   Recommendation: That the specialty society meetings in the new format for the annual meeting be encouraged to cover at least one and one-half or two days rather than a half day or one day as they have done in the 1964 session.
2. Committee on Hospitals
   Recommendation: That the liaison meetings between the Committee on Hospitals and the Executive Committee of the Tennessee Hospital Association continue in an effort to solve problems of joint interest. That the liaison activity of the TMA, THA and insurance industry be further encouraged and implemented.
3. Legislative and Public Policy Committee
4. Liaison Committee to Public Health Department
5. Insurance Committee
6. Memoirs Committee
7. Committee on Health Insurance
8. Committee on Cancer
9. Advisory Committee to the State Department of Public Welfare
10. Communications and Public Service Committee
11. Grievance Committee
12. Rural Health Committee

ACTION: **ADOPTED**

The report of the Reference Committee on Reports of Standing Committees—Reference Committee A was adopted as a whole.

Report of Reference Committee B on Reports of Special Committees

ROBERT H. HARALSON, M.D., Chairman

The Reference Committee recommended that the following special reports be adopted.

1. Consultative Committee on the Administration of Prepaid Medical Care Plans
   Recommendation: Since this Committee had already accomplished the purposes for which it was established, the Committee recommended that it be discontinued.
2. Committee on Disaster Medical Care
3. Committee on Occupational Health
4. Liaison Committee to the United Mine Workers of America
   Recommendation: That a letter of appreciation be sent to Dr. John Winebrenner for his excellent cooperation with organized medicine in the distribution of medical care to United Mine Workers and a copy of this letter be sent to the new administrator of the Knoxville Area United Mine Workers Welfare Fund, Dr. Allen Koplin.
5. Advisory Committee to the Woman's Auxiliary
6. Committee on Blood Banks
7. Committee on Mental Health
   Recommendation: That the report be approved with the deletion of sentences three and four of paragraph 1 of page 4, beginning with the words, "in event that" and ending with the words "own protection," and substituting the sentence, "It is recognized also that there is a great need for improvement in the judicial procedure for accomplishing involuntary admissions to mental hospitals and that changes in the Tennessee Laws regarding the mentally ill are desirable and necessary."
   Recommendation: That the Committee on Mental Health, the Committee on Legislative and Public Policy and the Commissioner of Mental Health of the State of Tennessee meet for the purpose of formulating a recommendation to the Legislative Council of the Tennessee Legislature for changes in existing laws pertaining to the mentally ill.

8. Health Project Contest Committee
9. Committee on Sight Conservation
10. Tennessee Committee for American Medical Education and Research Foundation
11. Committee on Youth and Education
12. Committee on Medicine and Religion
13. Woman's Auxiliary to TMA
14. AMA Delegation Report
15. Committee on Tuberculosis

ACTION: **ADOPTED**

The report of Reference Committee (B) on Reports of Special Committees was adopted as a whole.

Meeting in 1965

The Speaker pointed out that in adopting the change in the By-Laws, the Board of Trustees was charged with the responsibility of selecting a meeting site for the annual sessions.

The 1965 Annual Meeting will be held April 11-14, in Chattanooga, Tennessee.

There being no further business, the meeting of the House of Delegates adjourned at 11:25 A.M., sine die.

J. E. Ballentine
Executive Director

Abstract of Minutes of Council Meetings Tennessee Medical Association Peabody Hotel — Memphis — April 12-14, 1964

The Council of the Tennessee Medical Association convened on Sunday, April 12, 1964 in the Peabody Hotel, Memphis, with the Chairman, Dr. Francis Cole, presiding. The following members of the Council were present: Dr. J. O. Hale, First District; Dr. B. M. Overholt, Second District; Dr. Coulter S. Young, Fifth District; Dr. Harry T. Moore, Sixth District; Dr. O. M. McCallum, Eighth District; Dr. R. David Taylor, Ninth District; and Dr. Francis Cole, Tenth District.

Members of the Council presented for discussion matters which had been handled adequately and satisfactorily on the local level.

A report on violations of adoption laws in the state had been referred to the Council. Each of the physicians named had been personally contacted by the Councilor in his district and advised that the state regards this as unethical practice and that the State Medical Association could not defend any physician who was indulging in this type of activity.

The Council reaffirmed its position that matters concerning relationships of doctors of medicine and osteopathic physicians should be resolved at the county level. This problem will be discussed and re-evaluated at a later date.

Resolutions No. 7, 8, 9, and 10, to be presented in the House of Delegates, were discussed and it was felt by the Council that these resolutions should be combined; that resolution No. 7 might be better worded; and that Resolution No. 10 should have adequate discussion before approval by TMA.

Meeting of the Council April 14, 1964

The Council met on Tuesday, April 14, 1964, following the sessions of the House of Delegates. Councilors present were: Dr. J. J. Range, First District; Dr. Kenneth Haile, Fourth District; Dr. Harry T. Moore, Sixth District; Dr. O. M. McCallum, Eighth District; Dr. Byron O. Garner, Ninth District; and Dr. Francis Cole, Tenth District. Others present were: Dr. J. O. Hale and Dr. David Taylor.

Dr. Francis Cole, Memphis, was re-elected chairman of the Council.

Actions of the House of Delegates of TMA in passing resolutions presented were discussed at length. The Secretary of the Council was directed to ask that the following statement be published in the Journal: "By the decree of the House of Delegates of the TMA, at its last regular session, it is unethical for practicing physicians in the State of Tennessee to patronize commercial laboratories (those not under the control and supervision of a licensed M.D.).

Enforcement of this action will come in due time."

An explanation of the duties of councilors was given for the benefit of new members of the Council by Dr. Francis Cole and Dr. David Taylor. It was emphasized that many of the problems could be handled on a local level with much more dispatch than they could be at a state level.

Following discussion on drugs, alcohol, barbiturates and narcotics, the Chairman appointed a committee composed of Dr. Kenneth Haile, Dr. Byron O. Garner, and Dr. O. M. McCallum, to formulate a statement regarding the Council's official position on this matter and also in reference to their official stand on the refill of prescriptions.

The corporate practice of medicine was discussed at length and the Chairman stated that he would digest and extract the material and information available and would forward a summary to each Councilor. It was decided that meetings should be held with appropriate committees and representatives of the Tennessee Hospital Association, after which the Council would be better able to ascertain the full impact of changes necessary and to what extent these changes have been carried out. A committee, composed of Dr. Cole, Dr. J. J. Range and Dr. H. T. Moore, was appointed to keep close supervision over the problem of corporate medicine and to report at regular intervals to the Council on this problem.

O. M. McCallum, M.D., Secretary

Abstract of Minutes of the Meeting of the Board of Trustees, Tennessee Medical Association — Peabody Hotel, Memphis, Tennessee — Wednesday, April 15, 1964

The Board of Trustees of the Tennessee Medical Association convened for the regular second quarterly meeting, following the TMA Annual Meeting. The session began at 9:00 A.M. in the Peabody Hotel, Memphis.

Members of the Board present were:

J. Malcolm Aste, Memphis
John C. Burch, Nashville
John H. Burkhart, Knoxville
Bland W. Cannon, Memphis
E. L. Caudill, Jr., Elizabethton
C. D. Hawkes, Memphis
G. Baker Hubbard, Jackson
Joseph W. Johnson, Jr., Chattanooga
R. H. Kampmeier, Nashville
K. M. Kressenberg, Pulaski
Chas. A. Trahern, Clarksville

The following officers were nominated and elected by acclamation: Dr. John H. Burkhart, Knoxville, Chairman of the Board; and Dr. John C. Burch, Nashville, Vice-Chairman and Treasurer.

The following members were nominated and elected to compose the committees of the Board of Trustees: **Executive Committee**—Drs. John H. Burkhart, R. H. Kampmeier, E. L. Caudill, Jr., J. Malcolm Aste, and John C. Burch; **Finance Committee**—Drs. R. H. Kampmeier, John C. Burch, C. D. Hawkes; **Long-Range Planning Committee**—Drs. Burkhart, K. M. Kressenberg, and G. Baker Hubbard; **Advisory Committee to Governor**—Drs. Kampmeier, Burkhart, Bland W. Cannon, Thomas F. Frist, and John J. Lentz; **Liaison Committee to Medical Schools in Tennessee**—Drs. Cannon, Burkhart, Hubbard, J. Malcolm Aste, Chas. A. Trahern, and W. O. Vaughan, plus deans of medical schools. Members of the Committee on Implementation and Expansion of Kerr-Mills in Tennessee and the Advisory Committee to OASI were reappointed.

(1) Completed appointments to standing and special committees of the Association for 1964-65.

(2) Received a report from Dr. Alvin J. Ingram on activities of the TMA Delegation at the American Medical Association meeting in Portland, Oregon.

(3) Received a report from the TMA Council on reported violations of adoption laws.

(4) The report of the Committee on Mental Health contained a recommendation for establishment of provisions for the right of

the physician to maintain privileged communications between himself and his patient. This recommendation was discussed at length, however no action was taken by the Board.

(5) Approved a request from the Committee on Cancer wherein the Board of Trustees would direct the Tennessee Medical Association's Legislative Committee to take appropriate steps to inform the legislators of the need for increasing funds for cancer patients under the Indigent Hospitalization Program.

(6) Referred Resolutions No. 8 and 9 to the Committee on Blood Banks and Medical Laboratories for implementation.

(7) Referred Resolution No. 11 to its Liaison Committee to Medical Schools in Tennessee.

(8) Approved the certified public accountant's financial audit for 1963. Considered and approved the First Quarter Financial Statement for 1964. Approved an amount of $5,600 to be allocated as follows:

(a) Legal fees involved with incorporation of TMA	$650.00
(b) Increase in annual retainer fee for TMA attorney	$1,750.00
(c) Legal fees for intervention in court action on Optical Dispensing Act	$2,500.00
(d) Second Rural Health Conference	$ 500.00
(e) Dinner meeting with leaders of religious denominations in state by Committee on Medicine and Religion	$ 200.00

(9) As the result of the Metropolitan Government of Nashville handing down a decree that all types of associations should now be taxed, the Tennessee Medical Association received two letters stating that the real property of TMA would be taxed, and that all of the personalty, fixtures, equipment, supplies and cash in banks will be taxed. The forms were turned over to the TMA attorney and an application form for exemption had been prepared for filing. No action was taken by the Board, awaiting action on the exemption application.

(10) Discussed at length participation in "Health Careers for Tennessee," an organization set up under the Tennessee Hospital Education and Research Foundation. Final determination on this matter will be made at the meeting of the Board of Trustees on July 19th.

(11) The Nashville Academy of Medicine requested the Board of Trustees to consider designating official TMA spokesmen in several areas of the state so that prompt, factual statements may be issued to news media when necessary. It was also suggested that consideration be given to authorizing the officials of TMA and the headquarters staff to obtain other specialized counsel, if necessary. The Academy's recommendation was stimulated by the recent erroneous local newspaper statements involving the TMA and the drug formulary for the MAA Program.

It was suggested that the Executive Committee of the Board, with Mr. Ballantine and Mr. Williams, meet and explore the advantages and the feasibility of getting specialized assistance to meet the problem and present their findings and recommendation to the Board.

(12) Received a report from the Chairman of the Committee on Mental Health concerning hearings of the Legislative Council of Tennessee on laws relating to the mentally ill in Tennessee.

(13) Reviewed a letter from Commissioner of Public Welfare requesting a committee that could meet with him to discuss problems concerning the MAA and other welfare programs in the state. This was taken into consideration in appointing the Advisory Committee to the Department of Public Welfare.

John H. Burkhart, M.D., Chairman
J. E. Ballentine, Executive Director

CLINICOPATHOLOGIC CONFERENCE

City of Memphis Hospitals and University of Tennessee

Acoustic Neurinoma

Clinical Summary:

M. S., a 49 year old colored woman was seen for the first time in the Neurology Clinic, City of Memphis Hospitals on Sept. 18, 1963, and was admitted to the Neurology Service on this same date with the chief complaints of loss of hearing in the left ear and pain in the neck and back of the head.

The loss of hearing had gradually increased over the past 4 years to the point that she could no longer understand spoken words with the left ear. The pain in the neck had started approximately one year before admission and was described as a "dull and heavy feeling, not like a headache" which occurred with varied frequency and lasting for 10 to 15 minutes. This pain could be brought up by moving the head suddenly or lying on the left ear. It could be relieved by careful positioning of the head and also by lying on the right ear. She complained of stiffness of the neck on attempting to turn it to the left. She had many episodes of vertigo, which had been treated by a private physician with nicotinic acid with some relief. She also complained of roaring in the left ear and difficulty with both her speech and swallowing in recent months.

There was no significant past medical history or family history. She was a farmer and was in good health up until the beginning of the present illness.

Physical Examination: T. 99° F., B.P. 135/95, P. 80, R. 20. She was well developed, alert, oriented and cooperative. The neurologic examination only was contributory. *Cranial nerves:* vertical and horizontal (to left) nystagmus; decreased superficial sensation on the left side of the face and diminished corneal reflex on the left; some hypersthesia on the area of the first division of the 5th nerve. Questionable lower facial weakness on the left side; marked hearing loss on the left ear (air and bone conduction); Weber test lateralized to the right. The gag reflex was diminished on the left side; there was mild dysphagia. The remainder of the examination of the cranial nerves was within normal limits. *Motor system:* strength was normal throughout; DTR's were generally hyperactive but more so on the right side. Babinski was present on the right. The patient stood and walked with a wide base and marked ataxia with tendency to fall to the left side. Standing with eyes closed she would fall to the left side. Finger-to-nose, heel-to-knee, diadokokinesis and rebound tests showed definite ataxia of both right and left limbs, but definitely more marked on the left. *Sensory system:* questionable decreased superficial sensation on the left side of the body. No other abnormalities. There was no sphincter impairment. The patient maintained her head tilted to the left. The neck was supple.

E.N.T. consultant concluded there was definite indication of a retrocochlear lesion on the left side.

Laboratory findings. HCT. was in the 35.5 to 55 range; WBC. count was 4800 (52% P.M.N., 4% P.M.E., 38% Lymphs, 6% Monos.) The Hct. dropped to 23 on the day of death. Urinalysis was negative. Blood chemical determination: glucose 76 mg. and urea, 11 mg. per 100 ml.; Na. 141, K. 4.2, HCO_2 21 and Cl. 105 mEq/L. On Sept. 27, the glucose was 210 mg. and on Sept. 28 was 231 mg. and urea 18 mg. per 100 ml., Na. was 125, K. 3.5, bicarbonate 17 and Cl. 81 mEq/L. On Sept. 30, Na. was 145, K. 4.2, Cl. 101, and HCO_2 21 mEq/L. On Oct. 2, glucose was 154 and urea 28 mg. per 100 ml.

EKG. was normal. Skull x-rays showed "suggestion of widening of the internal auditory canal on the left with some erosion and widening of the sella posteriorly." Chest film showed normal lungs and heart. Laminography of the petrous pyramids showed "large area of destruction in the region of the left internal auditory meatus."

The patient was transferred to the Neurosurgery Service on Sept. 24, 1963 and craniotomy was done on the next day. Details of the surgical procedure and findings will be presented. Following operation the patient remained comatose; P. and B.P. rose, and the pupils became miotic. She was operated upon again and a large intracerebellar clot was removed along with a portion of the left cerebellar hemisphere. On Sept. 26 a tracheotomy was performed. She showed slight improvement, but on Sept. 27 suddenly went into shock which was treated in the usual manner with pressor drugs. She required Levophed to maintain the B.P. She continued in coma, receiving fluids and antibiotics as main therapy. On Oct. 4 she had overt upper GI bleeding. At 3 P.M. on the same day she was dead.

DR. D. J. CANALE (Neurosurgery). The symptoms are rather obvious in this case. She is a 49 year old colored woman who, with a background of apparently good health, has loss of hearing in the left ear. We are told that this has been gradually progressive over a 4 year period, and that at the time of admission she could not hear spoken words in the left ear. Now in the course of my discussion I am going to rely

*From the Departments of Surgery (Neurosurgery), Radiology, and Pathology, University of Tennessee College of Medicine, and the City of Memphis Hospitals, Memphis, Tenn.

on this as the key symptom in this particular case, as I believe it is.

The slowly progressive nature of the hearing loss is important. The other chief complaint, and we must rely on the examiner to find out the real nature of the problem here, is that of a heavy feeling in the back of the head and neck or of a dull pain of about a year or so duration. This was intermittent, and was related to postural changes. This is a symptom which would suggest some intracranial problem, but I don't think in itself it troubles us a great deal. She had many episodes of vertigo which were treated with nicotinic acid, which is a vasodilater, and she apparently had some relief from this. Again the protocol says she had vertigo and I always question what vertigo is when I haven't talked to the patient myself. A lot of people use "dizziness" and "vertigo" as synonyms, which is fine, but what is "dizziness"? Many essentially normal patients, if you ask them if they get dizzy, will say 'yes.' Maybe they get a little light-headed or a little wobbly or unsteady on their feet and this to them is dizziness. I am not sure in this case, but I presume that she did have true vertigo.

In recent months she had had tinnitus in her left ear and some difficulty in her speech and swallowing. These symptoms suggest a neurologic disorder affecting chiefly and most significant the 8th and 10th cranial nerves. One could not diagnose a tumor with certainty on the basis of the history alone, but one should certainly strongly suspect it. She certainly has a fairly well localized neurologic problem. The neurologic examination was significant in that she apparently had no papilledema, which means she probably did not have a marked increase in intracranial pressure. She had nystagmus, which was both vertical and horizontal, and was greater on looking to the left. This further helps to localize the problem on the left cerebellum hemisphere or left cerebellopontine angle. She had hypethesia on the left side of the face and a decreased corneal reflex, indicating involvement of the trigeminal nerve. The fact that the corneal reflex was decreased is an important sign and an important part of the examination, because this is a sensitive index of involvement of the trigeminal nerve. Frequently, the corneal reflex will be decreased before the patient is aware of any numbness in the face, and before one can observe any loss of sensation in the face. In checking sensitivity we are dependent on the patient's subjective response to a stimulus, while in checking the corneal reflex we can observe the eye blinking. She had questionable left facial weakness, which suggests a nuclear or supernuclear involvement of the left facial nerve. The 7th nerve may be involved with lesions in the cerebellopontine angle, which may initially involve just the lower part of the face. This is also actually often the easiest place to recognize facial weakness. I think we can consider this finding as consistent with the other findings.

The loss of hearing in the left ear, both to air and bone conduction is again a very important neurologic finding. Since bone conduction was also decreased, we can assume the patient had a nerve type of hearing loss due to involvement of the 8th nerve itself. The Weber test was "lateralized" to the right. We are told that the E.N.T. consultant felt that the patient had a retrocochlear lesion. The otologists use this term to donate a lesion of the 8th nerve which is central to the cochlear apparatus. In other words the acoustic nerve or the medullary centers. I would put a great deal of stock in an otologist telling me that he thought the patient had a retrocochlear lesion. One of the tests that indicates a lesion of the 8th nerve is the loss of discrimination, and this is where they test with phonetically balanced words, and although the patient's hearing threshold for pure tones may not be markedly impaired early, they frequently will have a marked impairment of their ability to discriminate words. Another test they use is a test for recruitment. Now there is usually no recruitment in a nerve lesion itself, whereas in a lesion of the cochlea, as seen in Meniere's disease, there is frequently a recruitment phenomenon. Another very useful test is the so-called Bekesy audiogram, where both continuous and interrupted pure tones are used and, depending on the pattern of the hearing loss for the two tones, the otologist can frequently tell you

the patient has a retrocochlear lesion. The so-called class III Bekesy audiogram is supposed to be pretty indictively of a lesion of the 8th nerve, particularly an acoustic neurinoma. Now along with the otologist's evaluations it would have been helpful if we knew what the results of the caloric stimulation of the labyrinth was. This is an early objective test to evaluate the 8th nerve, and I wonder if this was done? I don't think it is necessary, but again would have been a test we usually like to do. One irrigates the external auditory canal with a cold water, or preferably warm water at about 80 F., since cold water often makes patients with a normal labyrinth nauseated, being too stimulating. You observe the response of the eyes for nystagmus. This is a sensitive test, and in acoustic neurinoma is an early objective neurologic finding of involvement of the 8th nerve.

The diminished gag reflex on the left and the dysphagia point to involvement of the 9th and 10th nerve or their medullary centers on the left side. It is not stated in the protocol whether or not her speech was dysarthric, but we are told she had some difficulty in her speech. She had no weakness, but did have hypersthesia on the right and dysphagia, and this can presumably be related to involvement of the left pyramidal tract in the brain stem before it crosses over in the lower medulla to go to the right side of the body.

There was evidence of cerebellar involvement, in that the patient had ataxia with falling to the left, an ataxic gait, a positive Romberg sign, impaired rapid, alternating movements, or what we call diadokokinesis. Patients with cerebellar hemisphere lesions have difficulty in doing rapid, alternating movements in an orderly and smooth fashion. She also had the so-called rebound phenomenon which was present bilaterally but was greater on the left. We are told she had decreased sensitivity over the left side of the body, which to my way of thinking really doesn't fit with the other clinical symptoms we have enumerated so far. I want to point out this is a sensory examination, and in all such examinations we are dependent on the subjective response of the patients. I think it is usually the least accurate part of the neurologic examination. When it is questionable I would not put too much stock in it, and I would not be upset if it didn't fit with the other neurologic findings present. The head was tilted to the left. This ordinarily does not mean too much, but in a case like this where a posterior fossa tumor is suspected, this is consistent and a fairly common finding sign in such a lesion. It is classic in the cerebellar astrocytomas of children; the head is usually tilted to the side of the lesion.

The laboratory studies listed in the protocol are not very helpful in making a diagnosis, unless we had some studies of the cerebrospinal fluid which were not included in the protocol. If the protein were elevated it would be helpful, because it is usually elevated in posterior fossa tumors, although not necessarily so. I do not think that this was necessary in this case to make the diagnosis. The x-ray findings were significant since the laminograms showed a large area of destruction in the region of the internal auditory meatus. It is thought that eight nerve tumors usually arise in the part of the nerve just inside the internal auditory meatus. Dr. McCormick may be able to enlighten us a little bit about this, but I believe one of the explanations for this is that this was where the nerve picks up its Schwann sheath. There is also some evidence to suggest that these tumors frequently arise from the vestibular division of the 8th nerve. As I have said these x-ray findings are seen in acoustic neurinomas, but it is conceivable that tumors such as an epidermoid one or cholesterotoma, a chordoma, a meningioma, a metastatic tumor, or even an aneurysm could possibly cause this erosion. May we see the films now?

DR. COLBY GARDNER (Radiology): The main findings are: First, that the pituitary fossa shows destruction of cortex around its floor, with demineralization of the floor. The dorsum sella itself is thin. I can't distinguish here between an intrapituitary or primarily pituitary lesion and a secondary lesion producing increased intracranial pressure (Fig. 1). There is a slight shift of the calcified pineal from left-to-right. On this view there seems to be



FIG. 1. Skull x-ray showing destruction and demineralization of the floor of the pituitary fossa.

a large area of destruction within the region of the internal auditory canal (Fig. 2). In the laminographic sections, made in the Caldwell position, at a level of about 10 cm. back from the forehead, we see evidence again of a destruction lesion in the region on the internal auditory meatus. Acoustic neurinomas are said to account for about 8% of all brain tumors, but we have seen very few of them. Maybe we are missing most of them, but I rather doubt it.

DR. CANALE: The clinical picture and the x-ray findings are rather classic for cerebellopontine angle tumor, and in this particular case an acoustic neurinoma would be the most likely. I will mention the postoperative course briefly later, but I think the important thing for this discussion is diagnosis.

Acoustic neurinomas make up about 8 to 9% of intracranial tumors, are more common in females than in males, and most commonly occur in the 30 to 50 age group. Dr. Cushing, in his classic monograph, emphasized the importance of the early symptoms of disfunctioning of the acoustic nerve in the differential diagnosis of acoustic neurinomas from other lesions in the cerebellopontine angle. This patient had most of the major symptoms to be expected with 8th nerve tumors. Tinnitus is a common early symptom of acoustic neurinomas, but not necessarily a constant or prominent one. Paroxysmal pain and soreness in the neck and stiffness of the neck was a common symptom in Dr. Cushing series. Vertigo is usually not prominent, and though this patient had vertigo, I gather it was not

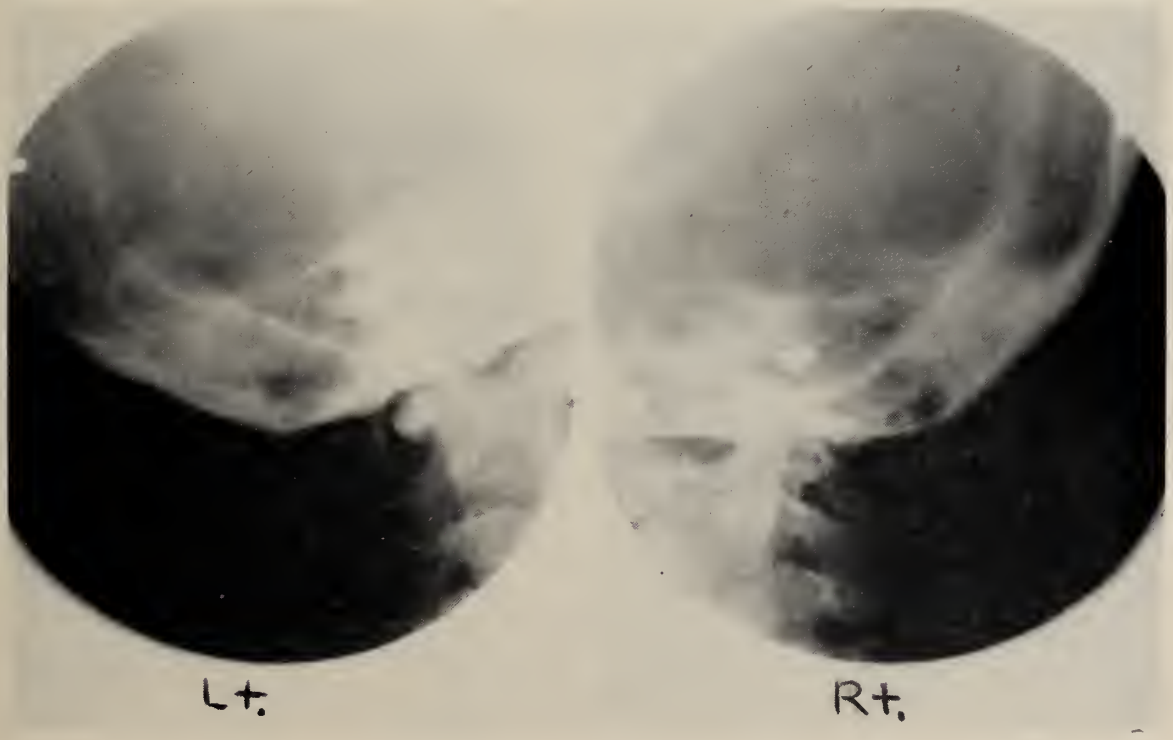


FIG. 2. Skull x-ray showing marked enlargement of internal auditory meatus.

too prominent. The vestibular nerve involvement is, of course, constant in acoustic aromas. Ataxia is present to a varying degree in almost all cases and usually involves the legs more than the upper extremities, and consequently the patient frequently will present with a somewhat staggering, unsteady gait before they begin to have a ataxia of the arms. Involvement of the other cranial nerves is found as the tumor enlarges, with involvement of the trigeminal and the facial nerves occurring in about two-thirds of the cases. Diplopia is also a fairly common symptom. Involvement of the 9th and 10th nerve with dysphagia and dysthesia are less common. Late symptoms are due to increased intercranial pressure as the tumor grows and occludes the aqueduct of Sylvius or kinks it. This usually results in headaches, blurred vision due to palpilledema, nausea, and vomiting. The x-ray findings of a shift in pineal can occur, and would suggest a tumor large enough to shift it. I would suspect it might well also have kinked the aqueduct. In internal hydrocephalus due to a tumor that blocks the normal flow of the cerebral fluid, as posterior fossa tumors so frequently do, there is an enlargement of the 3rd ventricle. As the 3rd ventricle enlarges, it presses down on the region of the sella and frequently will enlarge the sella to the point where it may even resemble a primary pituitary tumor. This enlargement also causes demineralization of the posterior clinoid processes, which this patient had.

Just briefly to mention the differential diagnosis. There is in addition to acoustic neurinomas, tumors which occur in the posterior fossa and which can present similar symptoms. Meningiomas can mimic acoustic tumors. They make up about 15% of intracranial tumors. Though these tumors do occur in the posterior fossa, they are much less common here than over the convexities of the cerebral hemisphere. I don't know how one could with absolute certainty rule out a meningioma in this case. However, I think it would be most unusual for one to enlarge the internal auditory meatus as in this case. A so-called cholesteatoma or epidermoid tumor are rare intracranial tumors, making up less than 1% of all primary intracranial neoplasms. When it does occur it seems to have a predilection for the cerebellopontine angle and can also erode the internal auditory canal. I suppose this tumor could be a possibility in this case, and I certainly cannot rule it out entirely on the basis of the findings we have so far. Another tumor which should be mentioned for completeness is cerebellar astrocytoma. As I mentioned before, it is much more common in children and its course would have been shorter than in this case, and would not have presented initially with loss of hearing, and been as slowly progressive. A brain-stem glioma, particularly a glioma occurring in the pons, can occur in adults. The course is usually much shorter, usually less than a year, and the neurologic findings are usually bilateral because of the location of the tumor and the involvement of all the long tracts as they pass through the pons. Aneurysms do occur in the posterior fossa, where they can arise from the basilar artery, the cerebellar arteries, or even from the internal auditory artery. I think that an aneurysm would be a very unusual and rare finding, and I would not consider it seriously in this patient.

In summary, I think this patient had a cerebellopontine angle tumor, and my first choice would be an *acoustic neurinoma.*

DR. McCORMICK (Neuropathology): Drs. Canale and Gardner did an excellent job with this case. I will merely document what they have so well covered.

For completeness sake I think that we might go over the otologist's findings in greater detail. The diagnosis of a retrocochlear lesion involving the 8th nerve was made on the basis of the following: the pure tone audiogram showed decreased hearing in the left ear, with very poor speech discrimination. The tonal decay test showed marked tonal decay at 1 K, 2 K and 4 K cps, indicating severe 8th nerve destruction. The von Bekesy test gave a typical type III curve, and Dr. Canale has already gone over what this implies. The nystagmogram showed the left vestibular apparatus to be inactive. The S.I.S.I. test was negative.

To further complete the clinical informa-

tion which was not included in the protocol, I will cite briefly several points from the operative note by Dr. Nofzinger. The cerebellar tonsils were noted to be empacted in the foramen magnum. When the incisura was opened a "gush" of the spinal fluid came from the left cerebellar hemisphere, following which the hemisphere became quite lax. The tumor was identified, and extended through the incisura and along the brain stem beneath the pons. The surgeons encountered considerable bleeding at that time, and had some difficulties with the transverse sinus. It was impossible for them to remove the entire neoplasm at operation, but the amount of tissue removed and sent to us for microscopic examination was 20 grams. The surgical pathologic diagnosis which we returned was that of an acoustic neurinoma, as predicted.

The findings at autopsy were straightforward, as will be illustrated momentarily. There was a large acoustic neurinoma of the left 8th nerve which had greatly distorted and compressed the brain stem and had obstructed the rostral fourth ventricle and the aqueduct of Sylvius, as had been predicted clinically. There was hemorrhagic infarction of the pons and cerebellum, as was also predicted by Dr. Canale. An acute duodenal "Cushing" ulcer was present, with an estimated 2500 cc. of blood in the upper G. I. tract. A view of the ventral surface of the brain with the tumor *in situ* (Fig. 3) reveals blood over the tumor and along the pons. Several silver clips are in place. There are large defects in the cerebellar hemispheres, more marked on the left, which are secondary to surgery. I had omitted to make the statement that the surgeons had to reopen the patient's head approximately 24 hours after the first operation to further decompress the brain. The full extent of the tumor cannot be well appreciated in this first photograph. The bed of the tumor, with the tumor partially retracted laterally and caudally, shows the under (dorsal) surface of the tumor (Fig. 4). Even partially resected it is very large. The marked compression and distortion of the pons is also well illustrated. As is often the case in both infra- and supratentorial masses, but more com-

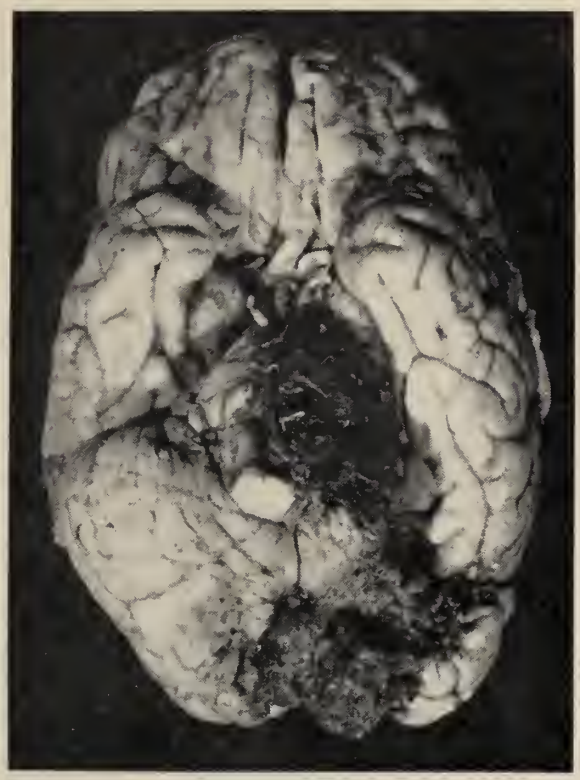


FIG. 3. Ventral surface of brain showing left acoustic neurinoma *in situ*. There is considerable operative hemorrhage about the tumor, pons and partially resected cerebellum.



FIG. 4. Close-up of bed of tumor illustrating distortion of pons and large size of the neoplasm.

monly the latter, there was a very prominent notching of the rostral pons near the mesencephalic-pontine junction by the incisura of the tentorium cerebelli. This notching was very striking in this case, and is often of considerable clinical importance. This is the so-called Kernohan's notch, which will produce false localization to the side opposite the lesion in the case of supratentorial lesions. This notch is not a real problem in this case.

The cross sections of the medulla and pons, with the tumor superimposed on its bed at one point, will give you an idea of the amount of tumor remaining as well as the extent of the hemorrhage into and the tremendous distortion of the pons by the tumor (Fig. 5). Figure 6 illustrates the left



FIG. 5. Cross-sections of pons and medulla showing marked distortion and intraparenchymal hemorrhages. A section of the tumor lies adjacent to a midpontine section.

trigeminal nerve stretched over the tumor; the distortion of the nerve by the tumor is very prominent. It is easy to see why a person with a tumor of one cranial nerve, most often the 8th nerve, may also have signs and symptoms of involvement of other cranial nerves.

The neoplasm has the typical appearance of Schwann cell tumors. Much of it is of the compact, highly cellular spindle-cell type with a tendency to form bundles running in different directions—the so-called

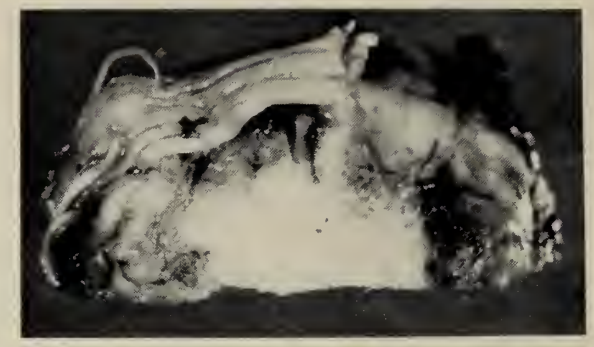


FIG. 6. The left trigeminal nerve is stretched out over the acoustic neurinoma, which was responsible for the clinical signs and symptoms of N. V involvement.

"herring-bone pattern" of Antoni A tissue (Fig. 7). There are multiple areas of much less compact nature, with large cells with foamy cytoplasm and no organoid arrange-



FIG. 7. Antoni A tissue from the neoplasm.

ment. This is the so-called Antoni B tissue (Fig. 8). These cells are also Schwann cells, as has been proven by several technics as, for example, tissue cultures, where they have been grown very nicely. Dr. Gardner has pointed out how uncommonly

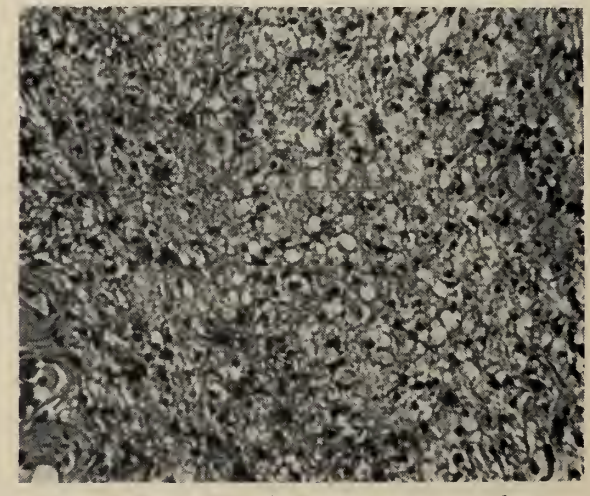


FIG. 8. Antoni B tissue from the neoplasm.

acoustic neurinomas are seen radiographically in this institution. For the 10 years there were 118 primary brain tumors coming to autopsy, only one of which was an acoustic neurinoma. I have reviewed for the 10 years 1952-1961, all autopsies on primary nervous system tumors in this institution. Thus, from the pathologic point of view, this is also an uncommon tumor. I cannot account for this rarity. Variations in the racial incidence of primary neoplasms of the nervous system is known and well documented. The best known and most talked about examples are the relatively increase in meningiomas in Negroes *vs.* Caucasian, and a decrease in astrocytomas in Negroes *vs.* whites. I know of no study of the racial effect, if any, on Schwannomas.

Anatomic Diagnosis:

Left acoustic neurinoma with massive brain stem compression and hemorrhage, postoperative.

Acute "Cushing" ulcer of duodenum with exsanguination.

BOOK REVIEW

New And Nonofficial Drugs 1964. Evaluated by A.M.A. Council on Drugs. J. B. Lippincott Company, Philadelphia, Pa. Price $4.75.

Annually attention is directed to this volume which summarizes the findings and decisions of the Council on Drugs of the A.M.A. For the practitioner of medicine who has real interest in knowing something of the drugs which he prescribes for patients, both as to their composition and pharmacologic action this book should always be in reach. The monographic descriptions of new drugs are of particular value as new categories of drugs are introduced to the physicians. For example, this volume includes a short monograph on "centrally acting skeletal muscle relaxants" preceding the description of individual drugs which are available in this category. This is but an example of the numerous discussions included in this volume.

President's Page



Dr. Kampmeier

"The War on Poverty" and the focus on *Appalachia,* with the accompanying implications relative to medical care, will awaken reminiscences in some of TMA's members.

The Tennessee Medical Foundation came into being as an arm of TMA following the report of a meeting in Charleston, West Virginia, of the AMA Council on Medical Service, its Council on Industrial Health and representatives of the United Mine Workers of America Welfare and Retirement Fund. This meeting in 1952 (reported in the JAMA in 1953) revealed the shocking state of medical care in some areas of Pennsylvania, Virginia, West Virginia, Kentucky, and Tennessee.

Tennessee's medical profession was the only one which accepted the challenge to attempt to do something about the matter. The Foundation received money from TMA, UMWA, a grant from the Commonwealth Fund, Women's Auxiliaries and TMA members. Its field secretary, William Massie, made a study in depth of the social, economic, and health situations in the depressed coal mining area which might even do Washington proud! The resources which TMA called upon were the State Health Department, the State Conservation Department, The State Planning Commission, the TVA, county officials, the University of Tennessee and Lincoln Memorial University.

The story of setting up medical facilities in Clear Fork Valley, the installation of Dr. Meek in these facilities, the razing of fire-trap hospitals, the building of community health centers, the establishment of a panel of Knoxville specialists as circuit-riding consultants, all added up to a story which fortunately was put into print for the record by the Commonwealth Fund, as *Medical Services for Rural Areas: The Tennessee Medical Foundation* (Harvard University Press, 1957). Even *Life Magazine* sent its reporters and photographers to record for posterity what organized medicine could do when it took the initiative.

As the "War on Poverty" becomes a political slogan, several dozen of TMA's members, including the very cooperative Area Director for UMWA, will recall the excitement of exploring the social, economic and health needs of a depressed area and the provision of medical care for its people. We learned a lot about our corner of *Appalachia* and did something about it. Dr. John Kesterson, of Knoxville, did the medical profession a favor recently, when he related this story to those in the White House.



President

THE JOURNAL

OF THE
TENNESSEE MEDICAL ASSOCIATION

Published Monthly
Devoted to the Interests of the Medical Profession of Tennessee
Office of Publication, 112 Louise Avenue, Nashville 5, Tenn.

Acceptance for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized July 15, 1932.

Copyright for protection against republication. Journals of the American Medical Association and of other state medical associations may feel free to quote from this Journal whenever they desire merely giving credit to this publication.

Address papers, discussions and scientific matter to R. H. Kampmeier, M.D., Editor, B-4211 Vanderbilt University Hospital, Nashville 12, Tennessee
Address organizational matters to Jack E. Ballentine, Executive Director, 112 Louise Avenue, Nashville 5, Tenn.

R. H. KAMPMEIER, M.D., Editor
Vanderbilt University Hospital, Nashville

EDITORIAL BOARD

ADDISON B. SCOVILLE, JR., M.D.
2104 West End Ave.
Nashville 5, Tennessee

ALBERT WEINSTEIN, M.D.
Medical Arts Building
Nashville 12, Tennessee

COMMITTEE ON SCIENTIFIC WORK AND POST GRADUATE EDUCATION

R. H. KAMPMEIER, M.D., Chairman
W. POWELL HUTCHERSON, M.D., Chattanooga
ROBERT P. MCBURNEY, M.D., Memphis
EUGENE J. SPIOTTA, M.D., Memphis
(Specialty Society Representatives to be named)

JUNE, 1964

EDITORIAL

THE DOCTOR'S ROLE IN ADOPTION

The officers of TMA have been acquainted of recurrent illegal conduct by some of Tennessee's physicians in the placement of children for adoption. The State's Department of Public Welfare has found, fortunately, that in most instances the doctor has acted inadvertently and in ignorance of the law. However, there are a few physicians who have continued as repeated offenders even though warned of their illegal activity. Though no legal action has been taken to date by the Department, there is no reason why it should not.

The Tennessee Code Annotated (Sections 36-101—36-137) as amended defines the purpose of the chapter as:—

"The primary purpose of this chapter is to protect children from unnecessary separation from parents who might give them good homes and loving care, to protect them from adoption by persons unfit to have the responsibility of their care and rearing, and to protect them from interference, long after they have become properly adjusted to their adoptive homes, by natural parents who may have some legal claim because of a defect in the adoption procedure.

"The secondary purpose of this chapter is to protect the natural parents from hurried decisions, made under strain and anxiety, to give up a child, and to protect foster parents from assuming responsibility for a child about whose heredity or mental or physical condition they know nothing, and to prevent later disturbance of their relationship to the child by natural parents whose legal rights have not been fully protected."

To carry out these purposes involves three professions—physicians, lawyers and social workers. The law is interested in, and demands assurance, insofar as it is possible to attain, that no hasty decisions be made in the giving of a child for adoption or that such a child be placed in an unsuitable home. Only thereby can tragedies be avoided. After all, the basic charge is the finding of a family for a child and *not* a child for a family.

The physician has a peculiarly important role in the placement of a child in a foster home. Not only may he have known the mother (particularly in the case of an unwed mother), but may know her family background, may have delivered her, and know of such complications at birth or shortly thereafter which might prove to be a handicap to the child in later life. But also, a physician must be called upon to give information of the health of the prospective parents, their mental stability, and he may be of great aid to such persons in determining whether they *really desire* an adopted child and whether they *should adopt* one.

Certain doctors and lawyers believe that if the natural mother requests their assistance to place her illegitimate child with foster parents they have the legal right to do so. But in doing so they act as agents for the mother—a capacity contrary to the law. (A natural mother of her own accord may legally give up her child to a named couple by a court proceeding. Such action is contrary to the accumulated experience of the need for protection for all parties to the adoption—child, natural mother and foster parents.) The argument used by the chronic lawbreakers is that at times infor-

mation about illegitimacy becomes common knowledge in the community if the child is placed for adoption through the Department of Public Welfare. This argument is a subterfuge! There are *eleven* private agencies licensed to place children for adoption, and seven of these are church affiliated, including the Jewish, Catholic and Protestant religions.

The Tennessee Adoption Law provides penalties as follow:—

"Should any person violate any of the provisions of this chapter, such violation is hereby declared to be a misdemeanor, and upon conviction thereof, such person shall be fined not less than two hundred and fifty dollars ($250) or more than one thousand dollars ($1,000) and may be imprisoned for a term not to exceed eleven (11) months and twenty-nine (29) days, in the discretion of the court, . . .

"No person, corporation or agency, except the department or an agency as defined in section 36-102, shall engage in placing children for adoption; and no such person or unauthorized corporation or agency shall be a party to an arrangement between prospective adoptive parents, and natural parents, for the placement of children for adoption. Any court of competent jurisdiction, upon the filing of a verified bill for injunction, by the state of Tennessee, on the behalf of the state department of public welfare, or by an agency, or by any person aggrieved, may temporarily enjoin or restrain any person, corporation, or agency, from engaging or attempting to engage in placing children for adoption in violation or threatened violation, of this chapter and upon final hearing, if the court determines that there has been a violation, or threatened violation, thereof, said injunction shall be made permanent."

Laws with the objectives of the Tennessee Law have been enacted by many states, which indicates that experience has dictated that a certain protection is needed for all parties to an adoption.

Why doctors and lawyers, otherwise law abiding citizens, we hope, continue to flout the law is difficult to understand. Alleged altruism would not seem to be the reason, since real altruism would recognize the need for doing all that is humanly possible for the adopted child in terms of a suitable home and a complete cutting of ties with the natural mother. One can only speculate, then, about more practical and ulterior motives which lead to continued illegal action.

R. H. K.

DEATHS

Dr. Charles Rogers, 81, Caryville, died April 4th at his home.

Dr. Jesse Leaphart Beauchamp, Memphis, 90, died at his home on May 19th.

Dr. Carruthers Love, 51, Memphis, died May 15th at Baptist Hospital after a short illness.

Dr. J. F. Adams, 82, Woodbury, died May 4th in Rutherford Hospital, Murfreesboro.

Dr. Ralph Michael Larsen, 60, Nashville, died May 18th at his home.

Dr. Eugene P. Johnson, 67, Old Hickory, died May 17th at Vanderbilt Hospital following surgery.

PROGRAMS AND NEWS OF MEDICAL SOCIETIES

Washington-Carter-Unicoi County Medical Society

East Tennessee State University was the scene of a special meeting of the Washington-Carter-Unicoi County Medical Society on May 7th. Premedical students and their advisers of ETSU and Milligan College were special guests of the group. Two noted authorities in the field of medicine were guest speakers: Dr. William G. Anlyan, dean-elect of the Duke University Medical School, and Dr. Gerritt L. Hekhuis, Colonel, Medical Corp, United States Air Force. Dr. Anlyan's topic was "Preparing for Medical School Today," and Dr. Hekhuis spoke on "Challenges of Space Medicine."

Dr. Dillard M. Sholes, Jr., President of the Society, presided, and the welcome address was made by Dr. Mack P. Davis, Academic Dean, East Tennessee State University.

Roane-Anderson County Medical Society

The regular meeting of the Society was held May 26th in the Cafeteria of the Oak Ridge Hospital. Guest speaker was Dr. Keith Reemtsma, Tulane School of Medicine, Department of Surgery. His subject was "Renal Heterotransplantation in Man." A business meeting of the society followed the dinner and scientific presentation at 8:30 P.M.

Knoxville Academy of Medicine

Senator Thruston Morton (R., Ky.) was guest speaker at the Annual Public Service Dinner of the Knoxville Academy of Medicine on May 8th at the C'est Bon Country Club. Approximately 400 physicians, businessmen, governmental leaders, educators, ministry attended the dinner. Dr. Walter H. Benedict, Chairman of the Public Service Committee, presided and Dr. John H. Burkhart, President, made the welcome address. The invocation was delivered by The Reverend Scott McClure, Evangelism Pastor, Second Presbyterian Church.

The regular monthly meeting of the Academy was held on May 12th at UT Memorial Research Center and Hospital Auditorium. Dr. William E. Powers, Director of Radiation Therapy, Washington University School of Medicine, St. Louis, Missouri, spoke on recent advances in cancer therapy with particular regard to "Preoperative Radiation Therapy: Biological Basis and Experimental Investigation."

Chattanooga-Hamilton County Medical Society

"The AMPAC Barnstormer" was presented by Mr. Jack Drake, Field Representative of the American Medical Political Action Committee, at the June 2nd meeting of Society. The meeting was held in the Interstate Auditorium.

Memphis-Shelby County Medical Society

The Memphis and Shelby County Medical Society met in regular session in the auditorium of the Institute of Pathology on May 5th. Capt. William Miles, Jr., M.C., U. S. Army Surgical Research Unit, Brooks Army Medical Center, Ft. Sam Houston, Texas, was guest speaker. His subject was "The Early Management of Patients with Major Burn Injuries."

NATIONAL NEWS

The Month in Washington
(From the Washington Office, AMA)

The American Medical Association and the American Pharmaceutical Association have warned Congress that too stringent regulations for clinical testing could result in valuable new drugs not being approved. The two associations testified before a House Government Operations subcommittee, headed by Rep. L. H. Fountain (D., N.C.) during its study of drug safety requirements from both government and industry aspects.

In another development, a federal district court held that regulations of the U. S. Food and Drug requiring repetition of the generic names of prescription drugs in labeling and advertising each time brand names are mentioned are not valid.

After a Silver Spring, Md., physician pleaded "no contest" to five counts of an indictment, the FDA said it would recommend that the Department of Justice take vigorous action against anyone suspected of falsifying drug research records. The Silver Spring physician had been indicted on charges of submitting false reports of clinical studies of five new drugs.

"While scientists in general have the highest integrity and the falsification of research data is the rare exception, this Agency views such falsification when it does occur as a menace to the public health," FDA Commissioner George P. Larrick said.

The American Medical Association testified that "even the most extensive premarketing clinical tests cannot always be relied upon as completely predictive of human toxicity."

Dr. Hugh H. Hussey, director of the AMA's Division of Scientific Activities, told the subcommittee that "it is entirely possible that more lives could be lost by keeping a valuable drug off the market during extensive clinical trials than would be saved by gaining a precise knowledge of the exact type and incidence of all side effects."

"Physicians realize that no drug can be considered completely safe. There is always an element of risk, no matter how small, whenever a chemical agent is administered to a patient. That risk can be minimized by adequate animal testing and pre-marketing clinical trials; it can never be eliminated."

Cautioning against government regulations that become unnecessarily burden-

some and restrictive, Dr. Hussey said the vital knowledge about drug toxicity "can be obtained only by utilizing the combined experience of the ultimate evaluators of drug safety—the well informed practicing physicians of the United States."

He pointed out that it is now known that the antibiotic chloramphenical (Chloromycetin) can produce aplastic anemia.

"The incidence of this adverse reaction has been estimated from as much as one in 60,000 to as little as one in 225,000," he noted.

"Using the high incidence figure, it can be seen that, statistically, it would be possible to treat 60,000 patients with the drug before a single case of aplastic anemia occurred," Dr. Hussey testified. "It is impractical and unreasonable to conduct clinical tests of this magnitude."

"Like animal tests, then, pre-marketing clinical trials are subject to certain limitations and can never supplant widespread clinical use as a means of assessing the ultimate hazards of a drug."

The American Pharmaceutical Association said that it was "concerned that the hysteria of the moment about drug safety could develop into an unwritten protocol of indecision and delay."

William S. Apple, executive director of the APA, said "the general public and individual patients must be informed that a benefit-to-risk ratio will always exist and that every effort is being made to reduce the risk and increase the benefit."

★

The American Medical Association has reiterated its opposition to military veterans getting free hospital services for non-service-connected disabilities and illnesses.

Dr. Russell B. Roth of Erie, Pa., a consultant at the Erie Veterans Administration Hospital, and Dr. David B. Allman of Atlantic City, N. J., a past president of the AMA, spoke for the AMA at a hearing of the House Veterans Subcommittee that was considering legislation that would expand the free government hospital services available to veterans with non-service-connected medical conditions.

Roth singled out for special criticism two bills that would expand outpatient services. "At the lowest estimate," Dr. Roth said, "these two bills would make some four million men eligible for complete outpatient care, dental as well as medical; either bill alone would make over two million men eligible, without regard to either a medical determination of service connection or the veteran's ability to meet the cost of such care. During my years on the (AMA) Committee on Federal Medical Services, I have often heard the claim that the provision of VA care for the veteran with non-service-connected disabilities consists in the main of the provision of care for veterans who are sick, broke, and have no place to go. There is no question that these bills would include many veterans who meet this description in each respect. However, they would also include a significant segment of our adult male population which would be made eligible to receive complete out-patient services at the expense of the taxpayer and without regard to the veteran's financial need."

Dr. Allman reviewed the Association's two general policies on the question of federal responsibility for veterans' medical care:

"—The first, that the best medical care possible should be provided to veterans who need treatment for conditions incurred or aggravated by their military service;

"—And the second, that the best possible medical care should be available to all Americans.

"On the basis of these principles, in 1953, the American Medical Association reached the firm conclusion that the primary purpose of the Veterans' Administration medical and hospital program should be the provision of care to veterans with service-connected disabilities.

"The medical profession has always held that the veteran who has suffered injury in the service of his country, the veteran who has an illness incurred during the course of his military service, and the veteran whose illness was aggravated as a result of his military service, has a right to care for those illnesses and disabilities at government expense. This is but a legitimate repayment for his sacrifice. . . .

"We believe that it is not the nation's re-

sponsibility to provide care for civilian disabilities simply because the civilians are men who spent time in uniform. It is not a question of the merit of these men, or whether they served their country truly and well. It is solely a question of the proper range of federal responsibility."

MEDICAL NEWS IN TENNESSEE

Second Annual Symposium on Chronic Pulmonary Diseases

The Hamilton County Tuberculosis Association held its second annual symposium on "Chronic Pulmonary Diseases" on May 15-16 at the Read House in Chattanooga. Three nationally known doctors, experts in the field of chest diseases, were featured speakers and panelists. They were: Dr. Robert R. Shaw, professor of thoracic surgery and chairman of the division of thoracic surgery, University of Texas, Southwestern Medical School, Dallas; Dr. David M. Spain, clinical professor of pathology, State University of New York, Down State Medical Center, New York; and Dr. Sidney H. Dressler, special assistant chief, tuberculosis branch, Communicable Disease Center, U. S. Public Health Service, Atlanta.

Practicing physicians in Tennessee, North Georgia, and North Alabama attended the meeting which was sponsored in cooperation with the Chattanooga-Hamilton County Medical Society and the Chattanooga Area Academy of General Practice.

Lecture in Cardiovascular Diseases

The third annual Nat T. Winston Memorial Lecture in Cardiovascular Diseases was held May 14th in Bristol. The one-day program is sponsored by the Appalachian Chapter of the Tennessee Heart Association and the Home Federal Savings and Loan Association. The lectures are named after the late Nat T. Winston of Johnson City.

Five specialists in heart disease participated in the program at Bristol Country Club: Dr. Paul M. Zoll, associate clinical professor of medicine at Harvard Medical School; Dr. Herman K. Hellerstein, associate professor of medicine at Western Reserve University; Dr. William L. Proudfit, staff physician at the Cleveland Clinic in the Department of Cardiology; Dr. Edgar A. Hines, Jr., emeritus consultant at Mayo Clinic; and Dr. Frank C. Spencer, professor of surgery at the University of Kentucky School of Medicine.

Oak Ridge Laboratory to Separate Viruses for Vaccine

Biologists at Oak Ridge National Laboratory will separate and concentrate samples of live viruses for possible use in experimental vaccines under a new agreement with the National Institute of Allergy and Infectious Diseases. The viruses will be processed in zonal centrifuge machines at the biophysical separation laboratory at the Oak Ridge Gaseous Diffusion Plant and will be sent to drug firms collaborating in the development of vaccine preparations under the auspices of the Institute's Vaccine Development Program.

Annual Postgraduate Heart Day

Two prominent heart specialists were featured speakers at the annual postgraduate heart day program on April 23rd in the Pharmacy-Pharmacology Auditorium in Memphis. Dr. Denton Arthur Cooley, professor of surgery, Baylor University College of Medicine, Houston, spoke on "Treatment of Acquired Valvular Disease by Total Valve Replacement." His second presentation was entitled, "Experience with Surgical Treatment of Coronary Insufficiency and Angina Pectoris." Dr. William Dressler, chief of the cardiac clinic and cardiographic laboratory in the Maimonides Hospital of Brooklyn presented two papers entitled, "Use of the Cardiac Pacemaker" and "Post Myocardial Infarction Syndrome."

Physicians and senior medical students from Arkansas, Mississippi, and Tennessee attended the program, sponsored by the Memphis Heart Association.

Vanderbilt University School of Medicine

A plaque was dedicated in Vanderbilt Medical School's metabolic unit on April 21st to the Searle family of Chicago, whose financial support helped start the unit. The Searles have supported the work of Van-

derbilt investigators since 1950. Their interest developed through Dr. Elliott V. Newman's research in diuretics and the continued grants since 1950 now total approximately $300,000.

★

Dr. Ben Eiseman, professor of surgery at the University of Kentucky Medical School, delivered the second annual Pauline M. King Memorial Lecture on May 15th in the Vanderbilt Medical School Auditorium. His topic was "Metabolic Functions in the Lungs—Theoretical and Practical Considerations." The lecture was presented during the annual meeting of the Kentucky Surgical Association which held its meeting in Nashville primarily to give its members an opportunity to hear about work being done at Vanderbilt.

University of Tennessee College of Medicine

Dr. Francis Murphey, chairman of the division of neurosurgery, has been named president-elect of the Harvey Cushing Society to assume the presidency in 1965. Membership in the national neurosurgical society is limited to neurosurgeons certified by the American Board of Neurological Surgery. Dr. Murphey was recently elected chairman of the American Board of Neurological Surgery.

★

Dr. George Cooper, Jr., professor of radiology at the University of Virginia Hospital in Charlottesville, will become chairman of the Department of Radiology at the College of Medicine and chief of radiologic services at the City of Memphis Hospitals, effective September 15. Dr. Cooper succeeds Dr. David S. Carroll who has resigned from the post, effective July 1st.

★

Dr. Nicholas R. Di Luzio, professor of physiology and biophysics, will become acting chairman of the Department of Physiology and biophysics, effective July 1. He will succeed Dr. J. P. Quigley who is retiring.

★

Dr. Webster Riggs, Jr. will join the staff as instructor in radiology on August 1st.

Mental Health Center Approved for Training Program

The Memphis Mental Health Center has been approved for a two-year training program in child psychiatry for resident physicians who have completed training in adult psychiatry. Dr. L. M. Graves, director of the Memphis and Shelby County Health Department which operates the Center, was notified of approval by the American Board of Psychiatry and Neurology and by the American Medical Association's Council on Medical Education. Dr. George W. Marten, director of the Center, will direct the training program—the second such program in Tennessee. The other is at Vanderbilt University in Nashville.

Middle Tennessee Medical Association

The 139th Semiannual meeting of the Middle Tennessee Medical Association was held May 21st at Sewanee Inn and Claramont Restaurant in Sewanee. The invocation was rendered by The Reverend David B. Collins, Chaplain, University of the South, Sewanee. The scientific program consisted of the following: "Epidermoids: Diploic and Intradural"—Dr. Joseph E. J. King, Murfreesboro; "Experiences with Congenital Hydronephrosis"—Dr. Tom E. Nesbitt, Nashville; "Presacral Neurectomy" —Dr. Horace T. Lavely, Jr., Nashville; "Bites and Stings"—Dr. Charles B. Keppler, Sewanee; "Newer Techniques in Radiological Diagnosis"—Dr. Eugene Klatte, Nashville; "Psychodynamics of Juvenile Delinquency"—Dr. Robert B. Hagood, Chattanooga; "The Use of Intravenous Local Anesthesia in Blocking the Arm and Leg" —Capt. John R. Deen, MC, USA, USAH, Fort Campbell, Kentucky; "Surgical Management of Atherosclerotic Lesions of the Arm and Hand"—Dr. W. Andrew Dale, Nashville; "The Management of Crushing Injuries of the Chest"—Dr. James P. Lester, Nashville; "Certain Interesting Surgical Aspects of Sickle Cell Disease"—Dr. Richard E. Green, Murfreesboro; "Surgery for Deafness: The Use of Prostheses in the Middle Ear"—Dr. William G. Kennon, Nashville; "The Management of Bladder Outflow Obstruction in Children"—Dr. Phillip P. Porch, Jr., Nashville.

Dr. Dan S. Sanders, Jr. was moderator for a symposium entitled, "Encephalitis." Panelists were: Drs. William M. Clark, Bettye S. Schurter, Sarah H. W. Sell, all of Nashville.

A discussion period followed each presentation.

PERSONAL NEWS

Dr. Fred B. Ballard has been named president-elect of the Chattanooga Area Heart Association.

Dr. B. K. Hibbett, III, Nashville, lectured on May 5th at the Municipal Auditorium in connection with a cancer film entitled, "Time and Two Women."

Dr. Oliver DeLozier, Knoxville, was named president-elect of the Southeastern Obstetrical and Gynecological Society at a recent meeting in North Carolina.

Dr. Robert F. Thomas, Sevierville, is Chairman of the Arthritis and Rheumatism Foundation drive in Sevier County.

Dr. Lewis W. Moore has returned to Chattanooga and opened his office for the practice of eye, ear, nose and throat specialty.

Dr. Blair D. Erb, Jackson, has been installed as president of the West Tennessee Heart Association, succeeding **Dr. R. David Taylor** of Dyersburg.

Dr. John H. Beveridge, Nashville, has been named president-elect of the Middle Tennessee Heart Association. He will succeed **Dr. Lloyd H. Ramsey,** Nashville, who was installed as president at the recent annual meeting of the Association.

Dr. John H. Saffold, Knoxville, has been installed as president of the East Tennessee Heart Association.

Dr. R. B. Turnbull, Memphis, spoke on "Current General Concept of Tuberculosis" at the annual meeting of the Northeast Arkansas Tuberculosis Association on April 30th.

Dr. W. Dan Calhoun, Manchester, has been named Coffee County medical examiner.

Dr. James G. Hughes, Memphis, was guest speaker at the annual meeting of the Memphis and Shelby County Chapter of the National March of Dimes Foundation.

Dr. Billy J. Allen has opened his office for general practice of medicine in Chattanooga.

Dr. Margaret W. Rhinehart, Spencer, was honored recently by citizens of Spencer and Van Buren County for dedicated service to the area.

Dr. T. K. Ballard, Jackson, was guest speaker at the annual meeting of the General Claims Division, Law Department of the Association of American Railroads in St. Louis, Missouri. His topic was "The Eternal Triangle—Doctor, Patient, Claim Agent."

Dr. C. D. Hawkes, Memphis, served a month on the teaching staff on board the S.S. Hope, mercy ship of the People-To-People Foundation, Inc.

Dr. William A. Nelson, Knoxville, has been elected president of the Knox County Tuberculosis and Health Association.

Dr. Harris L. Smith, Memphis, was guest speaker at the annual meeting of the Nashville-Davidson County Chapter of the Muscular Dystrophy Association on May 19th.

Dr. Thomas Frist and **Dr. Crawford Adams,** Nashville, participated in a Civic Forum on the subject, "Save Your Heart—Save Your Life" on May 18th in Waynesboro. The forum, sponsored by the Wayne County Heart Unit and health and civic organizations, was offered to the citizens of Wayne County.

Dr. James N. Etteldorf, professor of pediatrics at the UT College of Medicine, has been elected a representative of the American Medical Association on the Board of Pediatrics.

Dr. Edward Guy Campbell, immediate past chief of staff of St. Joseph Hospital in Memphis, and **Dr. Albert Grofmyer,** chief of staff, were presented silver cuff links for serving on the staff of the hospital for 25 years or more at the institution's 75th anniversary celebration, April 22nd.

ANNOUNCEMENTS

Calendar of Meetings, 1964

State

Sept. 28-29 —Tennessee Valley Medical Assembly, Tivoli Theatre, Chattanooga

Nov. 4-6 —Annual Assembly of Tennessee Academy of General Practice, Gatlinburg Auditorium

Regional

Aug. 20-22 —West Virginia State Medical Association, Greenbrier Hotel, White Sulphur Springs

Sept. 16-19 —Colorado Medical Society, Broadmoor Hotel, Colorado Springs

Sept. 29-Oct. 1—Kentucky State Medical Association, Kentucky Hotel, Louisville

Oct. 11-14 —Medical Society of Virginia, Golden Triangle Hotel, Norfolk

Oct. 13-15 —Indiana State Medical Association, Murat Temple, Indianapolis

Nov. 16-18 —Medical Society of District of Columbia, Statler-Hilton Hotel, Washington, D. C.

Nov. 16-19 —Southern Medical Association 58th Annual Meeting, Memphis

National

July 24 —American Diabetes Association, Royal York Hotel, Toronto

Aug. 24-27 —American Hospital Association, Palmer House, Chicago

Sept. 9-12 —International College of Surgeons (North American Federation) Chicago

Sept. 20-23 —American Urological Association (Northeastern Section), Pocono Manor Inn, Pocono Manor, Pa.

Sept. 28 —AMA Council on Occupational Health, Rice Hotel, Houston

Oct. 5-9 —American College of Surgeons, Conrad Hilton Hotel, Chicago

Oct. 10-14 —American Society of Anesthesiologists, Americana Hotel, Bal Harbour, Florida

Oct. 11-16 —American Society of Plastic and Reconstructive Surgeons, Fairmont Hotel, San Francisco

Oct. 15-21 —Association of American Medical Colleges, Denver Hilton Hotel, Denver

Nov. 29-Dec. 2—American Medical Association (Clinical Meeting), Auditorium Exposition Hall, Miami Beach, Fla. and Americana Hotel, Bal Harbour, Fla.

Postgraduate Courses— American College of Chest Physicians

"Respiratory Allergy and Immunity"—Lake Tower Motel, Chicago, July 27-29

"Electrocardiography in Infants and Children"—Henry Ford Hospital, Detroit, September 24-26

"Environmental Diseases of the Heart and Lungs" —Pick-Carter Hotel, Cleveland, September 28-30

"Clinical Cardiopulmonary Physiology"—Continental Hotel, Chicago, October 26-30

European Tour for SMA Members

A European Tour has been arranged for members of the Southern Medical Association and their immediate families. Departure from New York via jet to London, England on July 29th. Return to New York August 19. Stops will include Paris, Lucerne, Venice, Florence, Rome and Madrid. For further information, contact R. W. Kimbro, M.D., European Tour Director, P. O. Box 1005, Austin, Texas 78766.

Section of Otolaryngology of SMA

Dr. Ben Senturia, Chairman of the Section of Otolaryngology of the Southern Medical Association, announces that the Guest Speaker for the Memphis Meeting on November 16-19, will be Dr. Arthur Maxwell Alden of St. Louis, Missouri. Dr. Alden, Emeritus Associate Professor of Clinical Otolaryngology of Washington University, will speak on "Otolaryngology: Then and Now."

American Academy of Physical Medicine and Rehabilitation

The annual meeting of the American Academy of Physical Medicine and Rehabilitation will be held on August 24-27 at the Statler-Hilton Hotel, Boston, Massachusetts. It will consist of formal lectures, as well as educational seminars in the field of Disability Evaluation, Forensic Psychiatry, and Muscle Diseases.

PLACEMENT SERVICE

The Placement Service of the Tennessee Medical Association is designed to assist doctors and communities. Further information and contacts, to both physicians and communities, is available from the Public Service Office, 112 Louise Avenue, Nashville, Tennessee—telephone 291-4584.

Locations Wanted

GENERAL PRACTITIONER, 43 years of age, graduate of the Medical College of Georgia, would like to establish either solo or associate practice in any city in Tennessee. Residency. Now in private practice. Married. Presbyterian. Available immediately. LW-472

◆

GENERAL SURGEON, Board eligible, 30 years of age, graduate of the University of Tennessee, would like assistant, associate or solo practice in West Tennessee. Married. Protestant. Tennessee license. Available upon completion of fifth year of residency, July 1964. LW-497

◆

INTERNIST, with interest in cardiology, 32 years of age, now in active military service, graduate of the University of Louisiana College of Medicine, would like to establish associate, clinical or hospital practice in any large city in Tennessee. Single. Catholic. Available July 1964. LW-499

◆

OBSTETRICIAN-GYNECOLOGIST, 38 years of age, graduate of the University of Arkansas School of Medicine, would like assistant, associate, or clinical practice in Middle or West Tennessee city of 50,000 plus. Married. Protestant. Available July, 1965, now in residency. LW-501

◆

GENERAL PRACTITIONER, 26 years of age, graduate of the University of Tennessee College of Medicine, would like associate practice in East Tennessee town of 5,000 to 10,000. Married. Methodist. Available January 2, 1965. LW-534

◆

DERMATOLOGIST, 31 years of age, graduate of the University of Arkansas, would like assistant or solo practice in Middle or West Tennessee, 35,000 plus population. Married. Presbyterian. Now in residency. Available May 1965. LW-535

◆

GENERAL SURGEON, 31 years of age, graduate of Emory University, would like associate, clinical or other practice in East or Middle Tennessee, 50,000 plus population. Married. Protestant. Four years residency; now in Air Force. Available mid-July 1965. LW-536

◆

SURGEON, Thoracic, 43 years of age, graduate of the University of Tennessee, would like associate, clinical or institutional practice in East Tennessee. Tennessee license. Six years residency. Married. Presbyterian. Now in Air Force. Available January 1, 1966. LW-537

◆

PEDIATRICIAN, 31 years of age, graduate of the University of Arkansas, would like to establish associate practice in Middle or West Tennessee, 50,000 plus population. Married. Episcopalian. Now in residency. Available August 1965. LW-538

◆

OBSTETRICIAN-GYNECOLOGIST, 32 years of age, graduate of the Louisiana State University, would like to establish associate or clinical practice in East Tennessee, 50,000 plus population. Married. Catholic. Now in military service. Available April 1, 1965. LW-539

Physicians Wanted

GENERAL PRACTITIONER needed as associate in East Tennessee town with trade area of 6,000. One year internship required. New, private office; examining rooms and equipment available. Hospital located in town. Age 25-35 desired. PW-134

◆

INTERNIST and PEDIATRICIAN needed in Middle Tennessee town of 6,000. Office space available. Hospital in area. Near large metropolitan city. PW-136

◆

GENERAL PRACTITIONER needed in Southern Tennessee community of slightly over 600, trade area much larger. No other physician in area. Office space and some equipment available. PW-147

◆

GENERAL PRACTICE available for physician in suburb of large East Tennessee city. Office is ready for immediate occupancy. Good location. Support assured. PW-201

◆

INTERNIST is needed as an assistant in West Tennessee city of 15,000. Well established and equipped office. Age 25-35. Hospital practice required. Area an agricultural and industrial one. Good opportunity. PW-203

◆

PRACTICE and office equipment of deceased physician in West Tennessee city of over 5,000 for lease or sale. Any terms will be arranged. Office space is two examining rooms, two treatment rooms, laboratory, plus other essential facilities. Good general practice with general surgery. PW-204

◆

INDUSTRIAL PHYSICIAN, age 25-40, needed for industrial medicine by large concern in East Tennessee city of over 180,000. Office space and equipment provided. Regular office hours. Will assist in obtaining housing if desired. Good salary and fringe benefits. Excellent opportunity. PW-206

◆

ANESTHESIOLOGIST, certified or Board eligible, under 40 years of age, needed on fee-for-service practice in growing group with full partnership opportunity in short time. University city, East Tennessee. Desired terms and autobiography stated with initial reply, please. PW-207

◆

RADIOLOGIST needed for hospital of 100 beds located in North West town of 10,000. One year internship and three years residency desired. Lake recreational facilities nearby. Good housing and schools. PW-209

◆

GENERAL PRACTITIONER or INTERNIST to take over practice of physician in Northeast Tennessee city of 68,000. Office new and fully equipped; 1,600 sq. ft. consists of reception room, secretary's office; doctor's office; 4 examining rooms; fully equipped lab with full-time licensed lab technician. Staff will remain if desired. Excellent income. Present physician unable to continue practice due to serious impairment of health. Terms will be arranged to accommodate interested physician. PW-210.

OFFICERS OF THE TENNESSEE MEDICAL ASSOCIATION, 1964-65

President—R. H. Kampmeier, M.D., B-4211, Vanderbilt Hospital, Nashville
President-Elect—John H. Burkhart, M.D., 3000 North Broadway, Knoxville
Vice-President—George K. Henshall, M.D., Medical Arts Building, Chattanooga
Vice-President—Robert M. Finks, M.D., 2122 West End Avenue, Nashville
Vice-President—Lamb B. Myhr, M.D., Jackson Clinic, Jackson
Secretary—Charles A. Trahern, M.D., 1724 Memorial Drive, Clarksville
Excutive Director—Mr. J. E. Ballentine, 112 Louise Avenue, Nashville 37203

BOARD OF TRUSTEES

*John H. Burkhart, M.D., Chairman, (1967) 3000 No. Broadway, Knoxville
*John C. Burch, M.D., Vice Chairman and Treas., (1967) 2112 West End Ave., Nashville
*J. Malcolm Aste, M.D., (1965) 188 South Bellevue, Memphis
Bland W. Cannon, M.D., (1965) 402-B, 20 South Dudley Street, Memphis
*E. L. Caudill, Jr., M.D., (1966) 114 East H Street, Elizabethton
C. D. Hawkes, M.D., (1966) 220 South Claybrook Street, Memphis
G. Baker Hubbard, M.D., (1966) Jackson Clinic, Jackson
Joseph W. Johnson, Jr., M.D., (1965) Interstate Building, Chattanooga
*R. H. Kampmeier, M.D., (1966) Vanderbilt Hospital, Nashville
K. M. Kressenberg, M.D., (1966) 215 Cedar Lane, Pulaski
Chares A. Trahern, M.D., (1965)) 1724 Memorial Drive, Clarksville
(*Executive Committee of the Board of Trustees)

SPEAKER OF THE HOUSE

J. Malcolm Aste, M.D., 188 South Bellevue, Memphis
Vice-Speaker—Tom E. Nesbitt, M.D., 1921 Hayes Street, Nashville

COUNCILORS

First District—J. J. Range, M.D., Memorial Hospital, Johnson City (1966)
Second District—B. M. Overholt, M.D., 717 Cumberland Ave., S.W., Knoxville (1965)
Third District—M. F. Langston, M.D., 103 Palisades, Signal Mountain (1966)
Fourth District—Kenneth L. Haile, M.D., 137 W. Second Street, Cookeville (1965)
Fifth District—John Derryberry, M.D., 844 Union St., Shelbyville (1966)
Sixth District—Harry T. Moore, Jr., M.D., 326 Mid-State Medical Center, Nashville (1965)
Seventh District—Carl C. Gardner, Jr., M.D., 151 Hatcher Lane, Columbia (1966)
Eighth District—O. M. McCallum, M.D., Henderson (1965)
Ninth District—Byron O. Garner, M.D., Hillcrest Dr., Union City (1966)
Tenth District—Francis H. Cole, M.D., Chairman, 188 South Bellevue Boulevard, Memphis (1965)

DELEGATES TO THE AMA

Alvin J. Ingram, M.D., 869 Madison Avenue, Memphis (1965)
Chas. C. Smeltzer, M.D., 521 W. Cumberland Avenue, Knoxville (1966)
Daugh W. Smith, M.D., 1926 Hayes Street, Nashville (1965)
Alternates:
Julian K. Welch, Jr., M.D., Brownsville (1965)
Wm. J. Sheridan, M.D., Medical Arts Building, Chattanooga (1966)
W. O. Vaughan, M.D., 2103 Hayes Street, Nashville (1965)

PRESIDENTS AND SECRETARIES OF COUNTY MEDICAL SOCIETIES, 1964-65

COUNTY	PRESIDENTS	SECRETARIES
Bedford County	Henry Feldhaus, Jr., M.D., 484 Union St., Shelbyville	A. T. Richards, M.D., 208 Madison, Shelbyville
Benton-Humphreys County	Arthur W. Walker, M.D., Waverly	Hiram C. Capps, M.D., Waverly
Blount County	H. T. Vandergriff, M.D., Med. Arts Bldg., Maryville	O. L. Simpson, M.D., Center Bldg., Maryville
Bradley County	Jas. C. Lowe, M.D., 755 Broad St., N. W., Cleveland	James L. Allen, M.D., 420 Central Ave., N. W., Cleveland
Campbell County	James D. Crutchfield, M.D., 100 E. Ave., Lafollette	Roscoe C. Pryse, M.D., Lafollette
Chattanooga-Hamilton County	Edward T. Newell, Jr., M.D., 707 Walnut St., Chattanooga	C. Robert Clark, M.D., 210 Med. Arts Building, Chattanooga Mrs. Flo Richardson, 109 Med. Arts Bldg., Chattanooga—Executive Secy.
Cocke County	Glen C. Shults, M.D., 501 E. Main St., Newport	R. B. McMahan, M.D., 501 E. Main St., Newport
Coffee County	Ralph Brickell, M.D., 601 N. Atlantic St., Tullahoma	Earl Roles, M.D., Tullahoma
Consolidated Medical Assembly of West Tennessee	Lee Rush, M.D., Somerville	Harold Yarbro, M.D., 700 W. Forest St., Jackson
Cumberland County	R. G. Cravens, M.D., 311 S. Main St., Crossville	Jas. T. Callis, M.D., Crossville
Nashville Academy of Medicine	Addison Scoville, M.D., 2104 West End Ave., Nashville	Carl Gessler, M.D., 2760 Lebanon Rd., Nashville, 37214 Mr. Jack Drury, 112 Louise Avenue, Nashville—Executive Secretary
Davidson County		
Dickson County	W. A. Bell, M.D., 222 Church St., Dickson	Mary Baxter Cook, M.D., Charlotte
Fentress County	Guy C. Pinckley, M.D., Jamestown	B. F. Allred, M.D., Jamestown
Franklin County	E. W. Kirby-Smith, M.D., Sewanee	George L. Smith, M.D., Winchester
Giles County	K. M. Kressenberg, M.D., 215 Cedar Lane, Pulaski	W. H. Murrey, M.D., 215 Cedar Lane, Pulaski
Greene County	J. R. McKinney, M.D., Takoma Hos., Greeneville	John Lay, M.D., 222 N. Main St., Greeneville
Hamblen County	Luke Nabers, M.D., Morristown	E. Richard Baker, M.D., White Pine
Hawkins County	C. C. Johnson, M.D., 50 N. Church St., Rogersville	W. A. Phillips, M.D., Citizens Union Bank Bldg., Rogersville
Henry County	Richard G. Fish, M.D., Commercial Bank. Bldg., Paris	J. D. Mobley, M.D., E. Wood Clinic, Paris
Hickman-Perry County	Sam O. Jones, M.D., Centerville	Parker D. Elrod, M.D., Centerville
Jackson County	E. M. Dudney, M.D., Gainesboro	J. S. Johnson, M.D., Gainesboro
Knoxville Academy of Medicine	John H. Burkhart, M.D., 3000 Broadway, N. E., Knoxville	Ray J. Leffler, M.D., East Tenn. Baptist Hospital, Knoxville
Lawrence County	W. O. Crowder, Jr., M.D., 233 E. Gaines St., Lawrenceburg	James C. Hudgins, M.D., 200 S. Military, Lawrenceburg
Lincoln County	C. Doyne Toone, M.D., South Elk Avenue, Fayetteville	Anne U. Bolner, M.D., Lincoln County Health Dept., Fayetteville
Macon County	Jack C. Clark, M.D., Lafayette	C. C. Chitwood, Jr., M.D., Lafayette
Marshall County	W. S. Poarch, M.D., Lewisburg	H. C. Harris, M.D., Church St., Lewisburg
Maury County	Leon Ward, M.D., 400 W. 7th St., Columbia	Lawrence Nickell, M.D., Maury County Hospital, Columbia
McMinn County	R. Danny Hays, M.D., 7 Grove, N. W., Athens	Robert G. Hewgley, M.D., Med. Arts Bldg., Box 352, Athens
Memphis-Shelby County	William T. Satterfield, Sr., M.D., 1188 Minna, Memphis, 38104	J. Warren Kyle, M.D., 1079 Madison Ave., Memphis, 38104 Mr. Les Adams, 774 Adams Avenue, Memphis—Executive Secretary
Monroe County	Joe K. Wallace, M.D., Sweetwater	Joe Henshaw, M.D., 404 N. High St., Sweetwater
Montgomery County	Howard R. Kennedy, M.D., 419 Franklin St., Clarksville	Frank J. Malone, Jr., M.D., 408 Franklin St. Clarksville
Northwest Tennessee Academy of Medicine	J. H. Ragsdale, M.D., Ripley	Art Murphy, M.D., Trimble
Overton County	W. G. Quarles, M.D., Livingston	Jack M. Roe, M.D., Livingston
Putnam County	Claude M. Williams, M.D., General Hospital, Cookeville	Thurman Shipley, M.D., 135 W. 2nd St. Cookeville
Roane-Anderson County	Albert J. Ahler, M.D., 202 Carter St., Harriman	Robert DePersio, M.D., Med. Arts Bldg., Oak Ridge
Robertson County	Warren G. Hayes, M.D., Bell Bldg., Springfield	Sue C. Atwood, M.D., 500 Main, Springfield
Rutherford County	Lois Kennedy, M.D., 104 S. Spring St., Murfreesboro	Radford Smith, M.D., 420 N. University St. Murfreesboro
Scott County	Maxwell Huff, M.D., Oneida	Roy L. McDonald, M.D., Oneida
Sevier County	Charles L. Roach, M.D., Sevierville	Charles E. Waldrup, M.D., Gatlinburg
Smith County	Thayer S. Wilson, M.D., Carthage	David G. Petty, M.D., Carthage
Sullivan-Johnson County	F. G. McConnell, M.D., 142 Cherokee St., Kingsport	Robert E. Keith, M.D., Med. Dept., Tenn Eastman Co., Kingsport
Sumner County	W. Gordon Doss, M.D., Hendersonville	Kermit E. Jones, M.D., Westmoreland
Tipton County	Travis L. Bolton, M.D., 728 E. Sherrod, Covington	Warren A. Alexander, M.D., W. Pleasant Avenue, Covington
Warren County	J. E. Puckett, M.D., 203 West Main St., McMinnville	J. C. Gaw, M.D., 315 N. Spring St., McMinnville
Washington-Carter-Unicoi County	Dillard M. Sholes, Jr., M.D., 203 N. Sycamore St., Elizabethton	Gilbert A. Rannick, M.D., 107 W. Fairview Ave., Johnson City
Weakley County	Edward Welles, Jr., M.D., Dresden	M. K. Bottorff, M.D., Martin
White County	Donald H. Bradley, M.D., Sparta	Charles A. Mitchell, M.D., Sparta
Williamson County	Joel Lee, M.D., Franklin	H. P. Hoover, M.D., Franklin
Wilson County	Joe Frank Bryant, M.D., McFarland Hospital—Lebanon	T. R. Puryear, M.D., 239 E. Main, Lebanon



Young Woman
Reading a Letter
JOHANNES VERMEER
1632-1675

In Pregnancy...

METAMUCIL® Acts Gently, Safely, Effectively

brand of psyllium hydrophilic mucilloid

The highly refined mucilloid of Metamucil corrects constipation in pregnant patients simply by augmenting the natural stimulus to peristalsis.

The bland, smooth bulk provided by Metamucil softens hard fecal masses, stimulates natural reflex activity of the intestinal musculature without irritant or systemic effects and tends to restore the normal rhythms of elimination.

Average Adult Dosage: One rounded teaspoonful of Metamucil powder (or one packet of Instant Mix Metamucil) in a glass of cool liquid. Metamucil powder contains equal amounts of refined, purified psyllium and dextrose furnishing 14 calories and is available in containers of 4, 8 and 16 ounces.

Instant Mix Metamucil is supplied as individual single-dose packets, each incorporating 0.25 Gm. of sodium, in cartons of 16 and 30.

G. D. SEARLE & CO.
CHICAGO, ILLINOIS, 60680
Research in the Service of Medicine

Tennessee Medical Association's

Exclusively Approved

GROUP DISABILITY INCOME PROGRAM

Administered By

Smith, Reed, Thompson & Ellis Co.

1322 Nashville Trust Building
NASHVILLE 3, TENNESSEE
Phone 255-7625

WILLIAM H. ELLIS, C. L. U. MGR.
THOMAS G. HENRY

ASSOCIATES

Alden H. Smith, C. L. U.

Arthur D. Reed, C. L. U.

Joe Thompson, Jr., C. L. U.

Alden H. Smith, Jr., C. L. U.

E. Dan Smith, II

Underwritten By

Commercial Insurance Company

Newark, New Jersey



After Surgery: B and C vitamins are therapy

herapeutic amounts of B and C in stress formula vitamins often are vital during periods f physiologic stress. STRESSCAPS, designed to meet increased metabolic demands, ds in achieving a more comfortable convalescence, a more rapid recovery. After urgery, as in many stress conditions, STRESSCAPS vitamins are therapy.

Each capsule contains:

Vitamin B_1 (Thiamine Mononitrate)	10 mg.
Vitamin B_2 (Riboflavin)	10 mg.
Niacinamide	100 mg.
Vitamin C (Ascorbic Acid)	300 mg.
Vitamin B_6 (Pyridoxine HCl)	2 mg.
Vitamin B_{12} Crystalline	4 mcgm.
Calcium Pantothenate	20 mg.

Recommended intake: Adults, 1 capsule daily, for the treatment of vitamin deficiencies. Supplied in decorative "reminder" jars of 30 and 100; bottles of 500.

STRESSCAPS®

FOR PROFESSIONAL RECOMMENDATION ONLY

Stress Formula Vitamins Lederle

Lederle LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, N. Y.

7282-4



YOU:

HISTORY: 20 years of study, plus internship/residency. Substantial investment in professional location, equipment. **SIGNS and SYMPTOMS**: Reports that large home, growing family and minimal professional standard of living are a concern. Still ahead—college costs, retirement, natural estate ambitions. **PROGNOSIS**: Needs 15-20 peak years of income to pay off education, home; rear family; retire. All this while battling tough taxes, and without the benefit of social security or company paid life and disability insurance, pension plan. **TREATMENT**: Learn about Mutual Benefit Life's "Seven Significant Benefits". Talk with a M.B.L. representative. See how a built-for-you plan solves specific problems through unique disability clauses, unusually high cash and loan values, liberal survivor income options—and more. Write on your own professional letterhead for exclusive report covering a full range of typical insurance requirements for physicians. Just ask for a copy of *Consultant's Report*.

Those who plan ahead get ahead **MUTUAL BENEFIT LIFE** INSURANCE COMPANY, NEWARK, NEW JERSEY

CARRIER OF YOUR TENNESSEE MEDICAL ASSOCIATION GROUP LIFE INSURANCE PLAN

EDWARD C. DUNN	SETH W. SIZER	THERON M. LEMLY
1104 Sudekum Bldg.	1211 James Bldg.	1309 Poplar Ave.
Nashville, Tenn.	Chattanooga, Tenn.	Memphis, Tenn.

Nashville Surgical Supply Company

The Physician and Hospital's Complete Supply & Service Source

Physicians equipment and supplies

Hospital equipment and supplies

Laboratory equipment and supplies

THE MOST COMPLETE DRUG AND BIOLOGICAL SUPPLY SOURCE IN TENNESSEE

Distributor for Standard and Mattern X-Ray Equipment and Supplies

24-Hour Emergency Service

Nashville Surgical Supply Co., Incorporated

1911 Church St.

Nashville, Tennessee

Phone AL 5-4601

REFER EYE PATIENTS
TO AN
EYE PHYSICIAN

By so doing, you will be assured of a complete diagnosis of your patients' eyes.

Guild Opticians complete the cycle for Professional Service.

GUILD OF PRESCRIPTION OPTICIANS OF AMERICA

BE SAFE—BE SURE

SEE

YOUR GUILD OPTICIAN

FOR

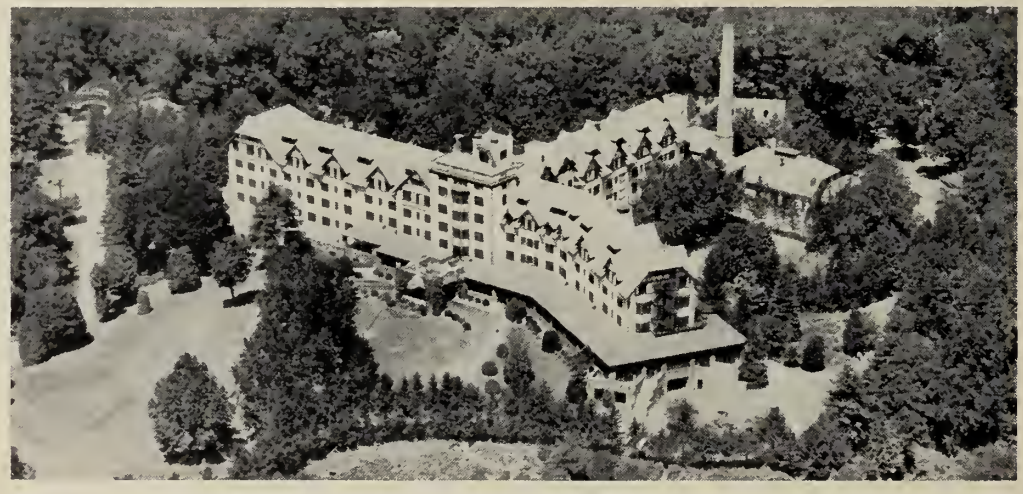
THE BEST SERVICE

EYE PHYSICIANS: Please Note—

Your prescriptions for glasses are "SAFE" when referred to a Guild Optician. Bound by the code of Ethics to uphold the highest standards in optical service.

APPALACHIAN HALL
Established 1916

Asheville North Carolina



An Institution for the diagnosis and treatment of Psychiatric and Neurological illnesses, rest, convalescence, drug and alcohol habituation.
Insulin Coma, Electroshock and Psychotherapy are employed. The Institution is equipped with complete laboratory facilities including electroencephalography and X-ray.
Appalachian Hall is located in Asheville, North Carolina, a resort town, which justly claims an all around climate for health and comfort. There are ample facilities for classification of patients, rooms single or en suite.

WM. RAY GRIFFIN, JR., M.D. MARK A. GRIFFIN, SR., M.D.
ROBERT A. GRIFFIN, M.D. MARK A. GRIFFIN, JR., M.D.

For rates and further information write
Appalachian Hall, Asheville, N. C.

SAINT ALBANS

PSYCHIATRIC HOSPITAL

(A Non-Profit Organization)

Radford, Virginia

Telephone: 639-2482

STAFF

James P. King, M.D., Director

William D. Keck, M.D.
Clinical Director
James K. Morrow, M.D.
Silas R. Beatty M.D.
Jack M. Rogers, M.D.

Edward W. Gamble, III, M.D.
Morgan E. Scott, M.D.
Jean M. Glasgow, M.D.
J. William Giesen, M.D.
Internist (Consultant)

Clinical Psychology:

Thomas C. Camp, Ph.D.
Artie L. Sturgeon, Ph.D.

Don Phillips
Administrator

AFFILIATED CLINICS

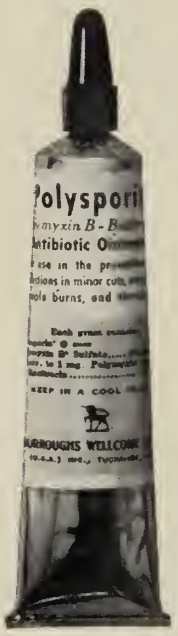
Bluefield Mental Health Center
525 Bland St., Bluefield, W. Va.
David M. Wayne, M.D.
Phone: 325-9159

Beckley Mental Health Center
109 E. Main Street, Beckley, W. Va.
W. E. Wilkinson, M.D.
Malcolm G. MacAulay, M.D.
Phone: 253-8397

Charleston Mental Health Center
1119 Virginia St., E., Charleston, W. Va.
Richard D. Kitching, M.D.
Phone: 344-3578

Norton Mental Health Clinic
Norton Community Hospital, Norton, Va.
Pierce D. Nelson, M.D.
Phone: 1090

in treating topical infections, no need to sensitize the patient



USE 'POLYSPORIN'® brand POLYMYXIN B-BACITRACIN ANTIBIOTIC OINTMENT

broad-spectrum antibiotic therapy with minimum risk of sensitization

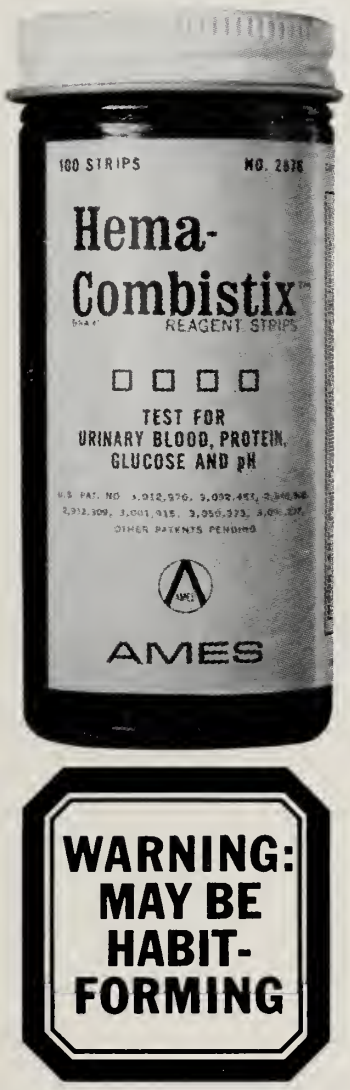
Caution: As with other antibiotic products, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs. **Supplied:** in ½ oz. and 1 oz. tubes.

Complete literature available on request from Professional Services Dept. PML.

BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, N.Y.

List of Advertisers in This Issue

American Cyanamid Company	XI, XII, XIII, XXIV, XXV, XXVII, XXXIII
Ames Co., Inc.	XXXIX
Appalachian Hall	XXXVI
Blood Bank Foundation	XVIII
Brayten Pharmaceutical Co.	XVII
Burroughs Wellcome & Co.	VI, XXXVIII
Chatham Pharmaceuticals, Inc.	X
Coca-Cola	XXVI
Farringer & Company	XXII
Guild Opticians	XXXVI
Gyne-Cytology Laboratory, Inc.	XXVIII
Kay Surgical, Inc.	XVIII
Lilly, Eli and Co.	I, XXX
Massengill Agency	XXVI
Mutual Benefit Life Ins. Co.	XXXIV
Nashville Pure Milk Co.	XXVIII
Nashville Surgical Supply Co., Inc.	XXXV
Parke-Davis and Company	II
Robins, A. H. Co.	Insert, XXI
Saunders, W. B. Company	III
St. Albans	XXXVII
Searle, G. D. & Co.	XXXI
Smith, Kline & French Laboratories	VIII
Smith, Reed, Thompson & Ellis Co.	XXXII
Tafel Surgical Supply Co., Inc.	XXVI
Taft Chemical Corp.	XVI
U. S. Vitamin & Pharmaceutical Corp.	IX
Wallace Laboratories	VII, X, XIV, XV, XXIII, XXIX
White Surgical Supply Co.	XXVIII
Winthrop Laboratories	V



Once you have used **HEMA-COMBISTIX,**[TM] dip-and-read test for urinary blood, protein, glucose, and pH, it may become a habit to test every patient's urine routinely with this simple, convenient reagent strip. Most of the answers will be "negatives," but an unexpected "positive" may alert you to serious pathology even before related symptoms appear. The test takes only 60 seconds. As basic as the stethoscope...**HEMA-COMBISTIX** is a *good* habit to form. □ Ames Company, Inc., Elkhart, Indiana. 68764

AMES
AMES



New from Roche research

Valium®
(diazepam)

for
—situational, stress-induced tension
—the psychic tension of the common psychoneuroses
—emotional tension intensified by concomitant somatic components

also for
—the muscle spasms of cerebral palsy and athetosis

Dosage—Adults: Mild to moderate psychoneurotic reactions, 2 to 5 mg b.i.d. or t.i.d.; severe psychoneurotic reactions, 5 to 10 mg t.i.d. or q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; muscle spasm with cerebral palsy or athetosis, 2 to 10 mg t.i.d. or q.i.d.

Contraindications: Valium (diazepam) is contraindicated in infants, patients with a history of convulsive disorders or patients with a history of glaucoma.

Warning: Valium (diazepam) is not of value in dealing with psychotic patients manifesting anxiety and should be avoided when there is reason to believe the patient is psychotic.

Precautions: In elderly or debilitated patients, it is important to limit the dosage to the smallest effective amount to preclude the development of ataxia or oversedation (not more than 1 mg, 1 or 2 times daily initially, to be increased gradually as needed and tolerated). As is true of all CNS-acting drugs, until the correct maintenance dosage is established, patients receiving Valium (diazepam) should be advised against possibly hazardous procedures requiring complete mental alertness or physical coordination. Driving an automobile during the period of Valium (diazepam) therapy is not recommended. In general, the concurrent administration of Valium (diazepam) and other psychotropic agents is not recommended. If such combination therapy is used, careful consideration should be given to the pharmacology of the agents to be employed with Valium (diazepam)—particularly with known compounds which may potentiate the action of Valium (diazepam), such as phenothiazines, barbiturates, MAO inhibitors and other antidepressants.

Since Valium (diazepam) has a central nervous system depressant effect, patients should be advised against the simultaneous ingestion of alcohol and other central nervous system depressant drugs during Valium (diazepam) therapy. Safe use of Valium (diazepam) during pregnancy has not been established. The usual precautions are indicated when Valium (diazepam) is used in the treatment of anxiety states where there is any evidence of impending depression; particularly the recognition that suicidal tendencies may be present and protective measures may be necessary. The usual precautions in treating patients with impaired renal or hepatic function should be observed.

Side effects: In clinical use, fatigue, drowsiness and ataxia have been reported; in most instances these are dose-related and may be avoided by proper dosage adjustment. Mild nausea and dizziness may occur on occasion. As with any new agent, when it is administered for protracted periods of time, periodic blood counts and liver function tests are advisable. Abrupt cessation after prolonged overdosage may, in some patients, produce withdrawal symptoms (*e.g.*, convulsions, tremor, abdominal and muscle cramps, vomiting, sweating) similar to those seen with barbiturates, meprobamate and Librium® (chlordiazepoxide HCl). Changes in EEG patterns have been observed in patients during and after Valium (diazepam) treatment.

Paradoxical reactions, such as excitement, depression, stimulation, sleep disturbances, acute hyperexcited states and hallucinations have been reported. Other side effects noted have been blurred vision, diplopia, headache, incontinence, slurred speech, tremor and skin rash.

How supplied: For oral administration: Valium (diazepam) scored tablets, 2 mg, white, bottles of 50 and 500; 5 mg, yellow, bottles of 50 and 500.

ROCHE LABORATORIES / Division of Hoffmann-La Roche Inc / Nutley, N. J. 07110

3/5/64

LIBRARY OF THE RHODE ISLAND MEDICAL SOCIETY

THE JOURNAL OF THE TENNESSEE MEDICAL ASSOCIATION

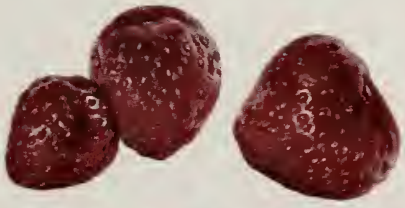
12TH ANNUAL
TENNESSEE VALLEY MEDICAL ASSEMBLY
SEPTEMBER 28-29, 1964
TIVOLI THEATER, CHATTANOOGA, TENNESSEE

JULY, 1964

Volume 57 Number 7

of Contents on Page IV
to Advertisers on
XXXVI

tempting strawberry taste treat for your iron-deficient patients



Zentron® Chewable

Iron, Vitamin B Complex, and Vitamin C

Combines iron with B complex vitamins in a chewable tablet

Additional information available upon request.
Eli Lilly and Company, Indianapolis 6, Indiana.

Lilly

400137



pollens in the grass...alas

Kapseals®
Benadryl®
(diphenhydramine hydrochloride)

FOR EFFECTIVE CONTROL OF ALLERGIC SYMPTOMS—*Antihistaminic action* relieves nasal congestion, sneezing, lacrimation, and pruritus. *Antispasmodic action* relieves bronchial spasm. **Precautions:** Persons who have become drowsy on this or other antihistamine-containing drugs, or whose tolerance is not known, should not drive vehicles or engage in other activities requiring keen response while using this product. Hypnotics, sedatives, or tranquilizers, if used with BENADRYL (diphenhydramine hydrochloride), should be prescribed with caution because of possible additive effect. Diphenhydramine has an atropine-like action which should be considered when prescribing BENADRYL (diphenhydramine hydrochloride). BENADRYL (diphenhydramine hydrochloride) is supplied in several forms including Kapseals containing 50 mg. 39864

PARKE-DAVIS

PARKE, DAVIS & COMPANY, Detroit, Michigan 48232



FOR YOUR ELDERLY ARTHRITIC PATIENTS...

an effective
GERIATRIC
antiarthritic
with
REASSURING SAFETY FACTORS

Effectiveness, dependability and reassuring Safety Factors make PABALATE-SF a logical choice for antiarthritic therapy in elderly patients—even when osteoporosis, hypertension, edema, peptic ulcer, cardiac damage, latent chronic infection and other common geriatric conditions are present. The potassium salts of PABALATE-SF cannot contribute to sodium retention... the enteric coating assures gastric tolerance... and clinical experience shows that this preparation does not precipitate the serious reactions often associated with corticosteroids or pyrazolone derivatives.

Side Effects: Occasionally, mild salicylism may occur, but it responds readily to adjustment of dosage. Precaution: In the presence of severe renal impairment, care should be taken to avoid accumulation of salicylate and PABA. Contraindicated: An hypersensitivity to any component.

Also available: PABALATE—when sodium salts are permissible. PABALATE-HC—Pabalate-SF with hydrocortisone.

Pabalate-SF

In each persian-rose enteric-coated tablet: potassium salicylate 0.3 Gm., potassium aminobenzoate 0.3 Gm., ascorbic acid 50.0 mg.

—the new, convenient way to prescribe
PABALATE-SODIUM FREE

A. H. ROBINS CO., INC., RICHMOND 20, VIRGINIA

The Journal of the TENNESSEE MEDICAL ASSOCIATION

Published Monthly

By Tennessee Medical Association

OFFICE OF PUBLICATION, 112 LOUISE AVENUE, NASHVILLE, TENNESSEE 37203

Second Class Postage Paid at Nashville, Tennessee

Volume 57
No. 7

JULY, 1964

Per Year, $5.00
Single Copy, 50 Cents

Published Monthly

Contents

The Selection of Medical Students, M. K. CALLISON, M. D., and F. L. ROBERTS, M. D., Memphis, Tenn. 281

Physical Medicine—Its Scope and Application in Medical Practice, ODON F. VON WERSSOWETZ, M.D., Chattanooga, Tenn. 289

Infantile Cortical Hyperostosis, CHARLES W. REAVIS, M.D., and HARVEY GRIME, M.D., Chattanooga, Tenn. 293

Cholecysto-Jejunostomy—A Poor Procedure, W. EDWARD FRENCH, M.D., Memphis, Tenn. 296

Peptic Ulcer—Surgical Management, Complications, and Mortality, JOHN RIDDLER, M.D., Jackson, Tenn. 299

Staff Conference 301

Clinicopathologic Conference 308

President's Letter 314

Editorial 315

Programs and News of Medical Societies 316

National News 317

Medical News in Tennessee 318

Personal News 319

Announcements 320

Placement Service 321

Officers of TMA 322

Instructions to Contributors

Manuscripts submitted for consideration for publication in the JOURNAL OF THE TENNESSEE MEDICAL ASSOCIATION should be addressed to the Editor, Dr. R. H. Kampmeier, Vanderbilt University Hospital, Nashville 12, Tennessee.

Manuscripts must be typewritten on one side of letter-weight paper. Either double or triple spacing and wide margins must be provided to facilitate editing which will be legible for the printer.

Bibliographic references should not exceed ten or twelve in number documenting key publications. They should appear at the end of the paper. The bibliographic references must conform to the style used in the American Medical Association publications, as,—Alais, F. G.: What Is Known About It, J. Tennessee M. A., 35:132, 1950.

Illustrations must be mounted on white cardboard and be numbered. The editor will determine the number, if any, of illustrations to be used. Additional illustrations will be charged to the author. The author's name should appear on the back of each illustration.

If reprints are desired, the requested number should be indicated in the letter accompanying the manuscript. The author will be billed by the publisher.

DEVOTED TO THE INTERESTS OF THE MEDICAL PROFESSION OF TENNESSEE

R. H. KAMPMEIER, M.D., Editor

This Association Does Not Officially Indorse Opinions Presented in Different Papers Published herein

Copyright, 1964, by the Tennessee Medical Journal

For the "modern Cinderella"

pHisoHex®

enhances any acne treatment



"...No other disease has caused so much feeling of inferiority" as acne.[1] pHisoHex "...is a valuable part of the management...since in addition to its defatting and cleansing properties, it offers an antibacterial action which reduces skin bacterial flora."[2]

In a series of 42 patients, none "...failed to improve," when pHisoHex was added for the wash.[3] In another series of 67, acne lesions "...cleared in a matter of one to two weeks" in 50 per cent with pHisoHex.[4] In another series of 100 patients using pHisoHex and pHisoAc®, 79 showed excellent or good improvement.[2]

The frequent exclusive use of pHisoHex enhances adsorption of its 3% hexachlorophene content to the skin; there it remains as a tenacious film to fight bacteria *between* washings. pHisoHex cleans thoroughly—is nonalkaline, hypoallergenic and "kind" to the skin. Three to four washings a day are needed for constant degerming of skin, faster and better results.

pHisoAc Cream dries, peels and masks lesions—helps prevent comedones, pustules and scarring. Contains colloidal sulfur 6 per cent, resorcinol 1.5 per cent and hexachlorophene 0.3 per cent.

How supplied: pHisoHex is available in unbreakable squeeze bottles of 5 oz. and 1 pint, in unbreakable plastic bottles of 1 gallon and in combination package with pHisoAc Cream.

References: **1.** Szymanski, F. J.: *Indust. Med.* 30:498, Nov., 1961. **2.** Wexler, Louis: *Clin. Med.* 70:404, Feb., 1963. **3.** Hodges, F. T.: *GP* 14:86, Nov., 1956. **4.** McLean, I. E. D.; Graham, K. T., and East, M. O.: *Practitioner* 189:82, July, 1962.

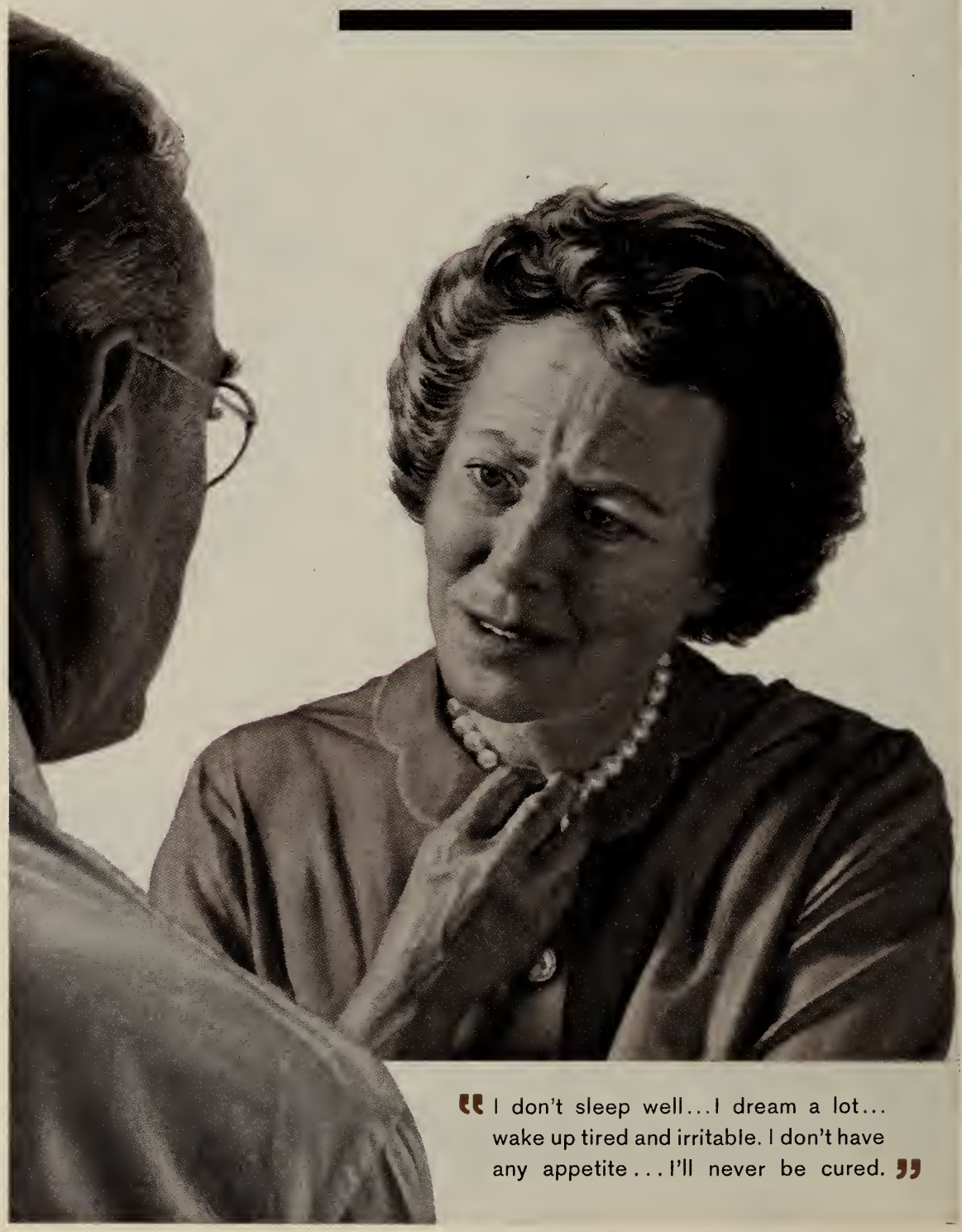
Winthrop

Winthrop Laboratories, New York, N. Y.



(1888-M)

RECOGNIZE THIS PATIENT?



"I don't sleep well...I dream a lot... wake up tired and irritable. I don't have any appetite . . . I'll never be cured."

When you recognize depression and anxiety related to an organic condition —*add 'Deprol' to your therapy*

Typical organic conditions in which 'Deprol' helps control related depression and anxiety:

cardiovascular disorders ■ arthritis ■ cancer ■ menopause ■ alcoholism ■ obesity ■ asthma, hay fever and related allergies ■ chronic infectious diseases ■ dermatoses ■ G.I. disorders, and many other debilitating or life-threatening illnesses

Advantages of 'Deprol'

1. By relieving both depression and anxiety, 'Deprol' lifts the mood of the depressed patient without the agitation and "jitters" that often accompany "energizer" therapy alone.
2. 'Deprol' relaxes physical tensions, restores normal sleep and revives interest in food.
3. 'Deprol' acts rapidly—patients often respond within a week or two.
4. 'Deprol' is compatible with drugs used to treat co-existing organic conditions.
5. 'Deprol' is relatively nontoxic and free of side effects.

Deprol®

meprobamate 400 mg. + benactyzine hydrochloride 1 mg.

Side effects: Slight drowsiness and, rarely, allergic or idiosyncratic reactions, due to meprobamate, and occasional dizziness or feeling of depersonalization in higher dosage, due to benactyzine, may occur. **Contraindications:** Previous allergic or idiosyncratic reactions to meprobamate contraindicate subsequent use of meprobamate or meprobamate-containing drugs. **Precautions:** Should administration of meprobamate cause drowsiness, the dose should be reduced. Operation of motor vehicles or machinery or other activity requiring alertness should be avoided if these symptoms are present. Effects of excessive alcohol may possibly be increased by meprobamate. Although suicides with 'Deprol' have not been reported, prescribe cautiously and in small quantities to patients with suicidal tendencies. Massive overdosage of meprobamate may produce lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse. Even though it has not been reported with 'Deprol', consider the possibility of dependence, particularly in patients with history of drug or alcohol addiction; withdraw gradually after prolonged use at high dosage. *Complete product information available in the product package, and to physicians on request.*

Usual adult dosage: 1 tablet t.i.d. or q.i.d. May be increased gradually, as needed, to 6 tablets daily. With establishment of relief, may be gradually reduced to maintenance levels. **Supplied:** Light-pink, scored tablets Bottles of 50.

WALLACE LABORATORIES / *Cranbury, N. J.*

CD-2022



Butazolidin®

brand of phenylbutazone
Tablets of 100 mg.

Butazolidin® alka

Each capsule contains:
phenylbutazone, 100 mg.
dried aluminum hydroxide gel, 100 mg.
magnesium trisilicate, 150 mg.
homatropine methylbromide, 1.25 mg.

It works!

Proved by over a decade of clinical experience.

Geigy Pharmaceuticals
Division of Geigy
Chemical Corporation
Ardsley, New York

Geigy

BU-2525

Tennessee Medical Association's

Exclusively Approved

GROUP DISABILITY INCOME PROGRAM

Administered By

Smith, Reed, Thompson & Ellis Co.

1322 Nashville Trust Building
NASHVILLE 3, TENNESSEE
Phone 255-7625

WILLIAM H. ELLIS, C. L. U. MGR.
THOMAS G. HENRY

ASSOCIATES

Alden H. Smith, C. L. U.

Arthur D. Reed, C. L. U.

Joe Thompson, Jr., C. L. U.

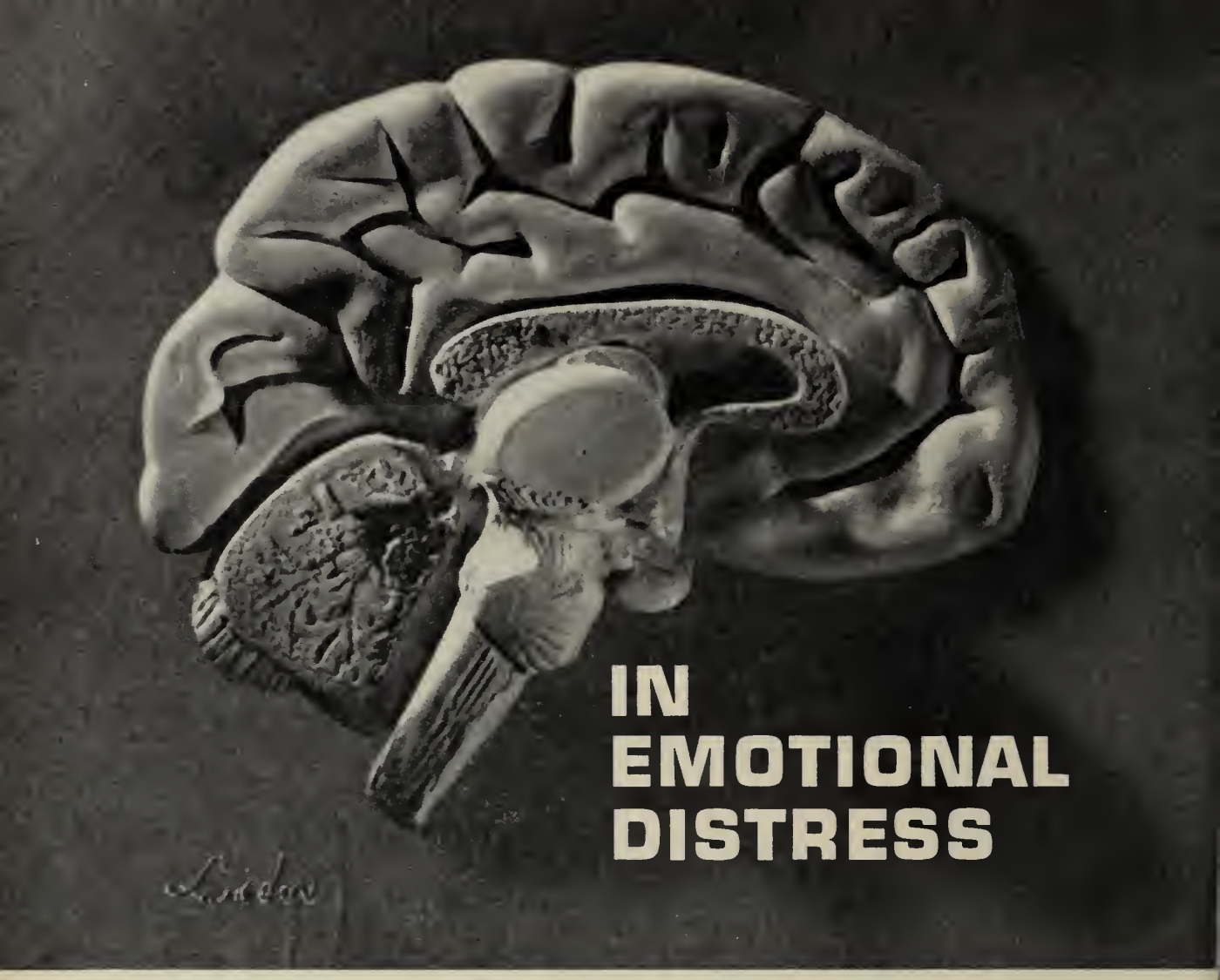
Alden H. Smith, Jr., C. L. U.

E. Dan Smith, II

Underwritten By

Commercial Insurance Company

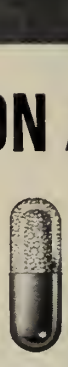
Newark, New Jersey



RELIEVES ANXIETY, APPREHENSION AND TENSION.



All day long
. . . keeps the patient calm, and the mind clear.



All night too
. . . aids restful sleep, with no barbiturate hangover.

MEPROSPAN®-400

(MEPROBAMATE 400 MG. SUSTAINED RELEASE)

Simplified, convenient dosage for emotional relief.

Side effects: 'Meprospan' (meprobamate, sustained release) is remarkably free of untoward reactions. Daytime drowsiness has not been reported. Rare allergic or idiosyncratic reactions may occur, generally developing after 1-4 doses of the drug.

Contraindications: Previous allergic or idiosyncratic reactions to meprobamate contraindicate subsequent use.

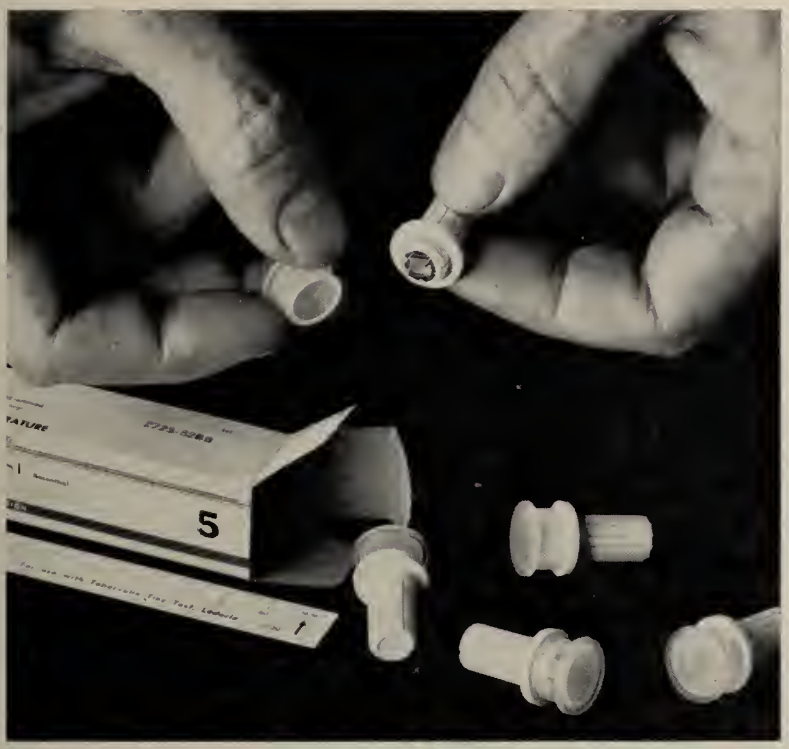
Precautions: Should administration of meprobamate cause drowsiness or visual disturbances, the dose should be reduced. Operation of motor vehicles or machinery or other activity requiring alertness should be avoided if these symptoms are present. Effects of excessive alcohol may possibly be increased by meprobamate. Prescribe cautiously and in small quantities to patients with suicidal tendencies. Massive overdosage may produce lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction; withdraw gradually after prolonged use at high dosage.

Complete product information available in the product package, and to physicians upon request.

Usual adult dosage: One 400 mg. capsule or two 200 mg. capsules at breakfast; repeat with evening meal.

Supplied: 'Meprospan'-400 (meprobamate 400 mg.), 'Meprospan'-200 (meprobamate 200 mg.), each in sustained-release capsules. Both potencies in bottles of 30.

WALLACE LABORATORIES *Cranbury, N. J.*





TAKE 5

...and find that a TB screening test has never been quite so easy

SWAB THE ARM— UNCAP A TINE TEST— PRESS—DISCARD THAT'S ALL THERE IS TO IT.

Comparable to the Mantoux in accuracy and sensitivity, the TUBERCULIN, TINE TEST is now available in plastic-capped units uniquely suited to general practice needs. They are so simple to use that you can test every patient with ease. Since it requires no refrigeration, the new package of five Tine Test units can stand on any convenient table in your examining rooms, ready for routine use. Side effects are possible but very rare: vesiculation, ulceration or necrosis at test site. Contraindications, none; but use with caution in active tuberculosis.

available as the new individually-capped unit, boxes of 5, or in cartons of 25

TUBERCULIN, TINE TEST

(Rosenthal) Lederle

LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, N.Y. Lederle

7999-4

"... their feelings of anxiety seemed to contribute to the urge to overindulge in cake, candy, and other rich food."[1]



ESKATROL® Trademark

Each capsule contains Dexedrine® (brand of dextroamphetamine sulfate), 15 mg., and Compazine® (brand of prochlorperazine), 7.5 mg., as the maleate.

SPANSULE®

brand of sustained release capsules

controls appetite all day long with a single morning dose

relieves the emotional stress that causes overeating

Brief Summary of Principal Side Effects and Cautions

Side effects (chiefly nervousness and insomnia) are infrequent, and usually mild and transitory.

Cautions: 'Eskatrol' *Spansule* capsules should be used with caution in the presence of severe hypertension, advanced cardiovascular disease, or extreme excitability. There is a possibility, though little likelihood, of blood or liver toxicity or neuromuscular reactions (extrapyramidal symptoms) from the phenothiazine component in 'Eskatrol' *Spansule* capsules.

Before prescribing, see SK&F Product Prescribing Information.

Supplied: Bottles of 50 capsules.

1. Viglione, J.P.: Clin. Med. *69*:1157 (May) 1962.

Smith Kline & French Laboratories SK&F

The case of diaper rash



solved by NEW UNDERCOVER AGENT

BAKER'S **CREME**

DIAPER-SIL™



CONTAINS : panthenol, benzalkonium chloride, dimethylpolysiloxane, in a water-miscible cream base.

eliminates ammonia-splitting bacteria. The bactericidal component, benzalkonium chloride, has a proven record of effectiveness. It acts rapidly against a wide range of organisms implicated in diaper rash — including Brevibacterium ammoniagenes and Alcaligenes faecalis.

soothing, healing, protective. DIAPER-SIL also provides panthenol in a special base containing silicone . . . helps to soothe inflamed skin, protect from external irritants and gently promote healing.

TO HELP PREVENT AND TREAT DIAPER RASH, CHAFING AND SIMILAR CONDITIONS

BAKER LABORATORIES, INC. Cleveland, Ohio 44115

Subsidiary of U. S. Vitamin & Pharmaceutical Corp.



Both the Cream and Ointment rarely sensitize and are bactericidal to virtually all gram-positive and gram-negative organisms found topically, including Pseudomonas aeruginosa and Staphylococcus aureus.

Indications: Wherever infection occurs and is accessible for topical therapy.

Caution: As with other antibiotic preparations, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs.

'NEOSPORIN'® brand
POLYMYXIN B / NEOMYCIN / GRAMICIDIN
ANTIBIOTIC CREAM

Ingredients: Each gram contains: 'Aerosporin'® brand Polymyxin B* Sulfate 10,000 Units; Neomycin Sulfate 5 mg. (equivalent to 3.5 mg. Neomycin Base); Gramicidin 0.25 mg.

In a smooth, white, water-washable vanishing cream base with a pH of approximately 5.0. Inactive ingredients: liquid petrolatum, white petrolatum, distilled water, propylene glycol, polyoxyethylene polyoxypropylene compound, emulsifying wax and 0.25% methylparaben as preservative.

*U.S. Patent Nos. 2,565,057-2,695,261

Available: In 15 Gm. tubes.

'NEOSPORIN'® brand
POLYMYXIN B / BACITRACIN / NEOMYCIN
ANTIBIOTIC OINTMENT

Ingredients: Each gram contains: 'Aerosporin'® brand Polymyxin B Sulfate 5,000 Units; Zinc Bacitracin 400 Units; Neomycin Sulfate 5 mg. (equivalent to 3.5 mg. Neomycin Base).

Available: Tubes of 1 oz., ½ oz. and ⅛ oz.

Complete literature available on request from Professional Services Dept. PML.

BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, N. Y.



FOR YOUR ELDERLY ARTHRITIC PATIENTS...

an effective GERIATRIC antiarthritic with

REASSURING SAFETY FACTORS

Effectiveness, dependability and reassuring Safety Factors make PABALATE-SF a logical choice for antiarthritic therapy in elderly patients—even when osteoporosis, hypertension, edema, peptic ulcer, cardiac damage, latent chronic infection and other common geriatric conditions are present. The potassium salts of PABALATE-SF cannot contribute to sodium retention...the enteric coating assures gastric tolerance...and clinical experience shows that this preparation does not precipitate the serious reactions often associated with corticosteroids or pyrazolone derivatives.

Side Effects: Occasionally, mild salicylism may occur, but it responds readily to adjustment of dosage. Precaution: In the presence of severe renal impairment, care should be taken to avoid accumulation of salicylate and PABA. Contraindicated: An hypersensitivity to any component.

Also available: PABALATE—when sodium salts are permissible. PABALATE-HC—Pabalate-SF with hydrocortisone.

Pabalate-SF

A. H. ROBINS CO., INC., RICHMOND 20, VIRGINIA

In each persian-rose enteric-coated tablet: potassium salicylate 0.3 Gm., potassium aminobenzoate 0.3 Gm., ascorbic acid 50.0 mg.

—the new, convenient way to prescribe
PABALATE-SODIUM FREE



Outwardly calm...but what goes on inside?

Appearances on the outside do not necessarily suggest what goes on inside. This is particularly true of the ulcer patient, who may appear jolly and unruffled to his neighbors, but presents to you the classic symptoms: organic and functional disorders of the G.I. tract, associated with anxiety and tension.

Consider, when you see him next, the value of PATHILON® SEQUELS® with Phenobarbital, which provides sustained anticholinergic protection from spasm and pain in the target areas, as well as sustained phenobarbital action against triggering anxiety. The controlled release of the active ingredients in the SEQUELS® formulation means protective medication day and night.

Effective in peptic ulcer, intestinal colic, ileitis, esophageal spasm, spastic colon, alcohol-induced G.I. upsets, gastric hypermotility and anxiety neurosis with G.I. symptoms. Should be used as adjunct to other measures.

Side Effects (due to tridihexethyl chloride): dry mouth, blurring of vision, constipation.

Contraindications: urinary bladder neck obstruction; glaucoma; obstructive congenital anomalies of the gastrointestinal tract; pyloric obstruction; congenital megacolon; and stenosing gastric or duodenal ulcer with significant gastric retention.

Also available, without phenobarbital, as PATHILON® Tridihexethyl chloride SEQUELS® 75 mg.

Pathilon® Sequels® with Phenobarbital Sustained Release Capsules

Each capsule contains: Tridihexethyl chloride, 75 mg., and phenobarbital, 45 mg.

LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, New York

Lederle

279-4



Ideal Location for M.D. in Morristown, Tennessee, next door to newly expanding multi-million dollar hospital. Office building, with or without equipment for lease—reasonable. Contact Massengill Agency, 201 East First Street, Morristown, Tennessee. Phone 586-6653.

Remember, Doctor—

It's been

Tafel Surgical Supply Co., Inc.

SINCE 1889

for

Drugs, Orthopedic, Surgical

Supplies & Equipment

1203 Church Street

Nashville, Tennessee

Reprint Price Schedule

THE JOURNAL OF TENNESSEE MEDICAL ASSOCIATION

	100	200	300	400	500	600	700	800	900	1000	Add'l 1000
2 pages	12.80	14.15	15.60	17.30	17.65	18.00	18.55	19.50	20.70	21.85	12.00
4 pages	18.80	23.00	25.60	28.50	29.60	30.25	31.20	33.55	35.65	37.80	22.60
8 pages	36.80	41.60	46.15	51.00	52.30	53.00	54.45	57.85	61.50	64.90	35.00
12 pages	48.10	53.40	58.60	63.75	64.70	65.15	66.60	70.80	75.00	79.00	41.60
Envelopes 8¼x11¼	13.30	16.00	18.50	21.30	22.50	24.00	26.40	28.80	31.20	33.60	26.40

Reprints of articles in THE JOURNAL OF TENNESSEE MEDICAL ASSOCIATION are available at the following prices. Orders should be placed within 30 days following publication of the journal in which the article appears.

The above prices are for reprints supplied in the page size of THE JOURNAL OF TENNESSEE MEDICAL ASSOCIATION. If smaller or larger sizes are required, special prices must be obtained. Address

McQUIDDY PRINTING COMPANY **NASHVILLE, TENNESSEE**



an easier way?

'METHEDRINE'® brand
METHAMPHETAMINE HYDROCHLORIDE

is an easier way to help control food craving & keep the reducer happy

With "hunger pains" abolished, the patient can shrug off the chains of psychogenic craving that bind him to his habit of overeating and cooperate cheerfully with the prescribed diet.

In obesity, "...our drug of choice has been methedrine (methamphetamine hydrochloride)... because it produces the same central effect with about one-half the dose required with plain amphetamine, because the effect is more prolonged, and because undesirable peripheral effects are significantly minimized or entirely absent." Douglas, H. S.: West. J. Surg. **59**:238 (May) 1951.

Description: Each scored tablet contains 5 mg. 'Methedrine' brand Methamphetamine Hydrochloride.

Dosage: 2.5 mg. (½ tablet) 3 times daily. May be increased gradually according to response; more than 10 mg. daily rarely is needed. The last dose of the day should not be taken later than 6 hours before bedtime.

Side effects: Insomnia may occur if taken later than 6 hours before retiring. The usual peripheral actions of sympathomimetic amines (vasoconstriction and acceleration of the heart) are minimal and little noticed on low or moderate dosage.

Contraindications and precautions: Should not be used in patients with myocardial degeneration, coronary disease, marked hypertension, hyperthyroidism, insomnia or a sensitivity to ephedrine-like drugs. Moderate hypertension in the obese is not necessarily a contraindication since it may be relieved as the overweight is reduced.

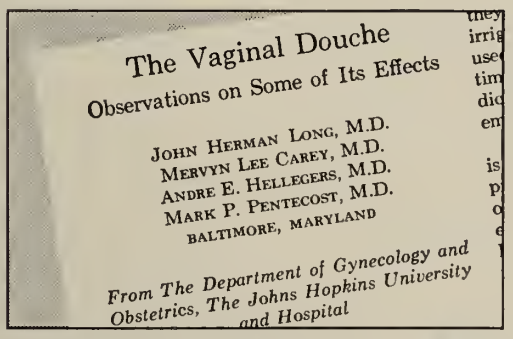
Supplied: Tablets 5 mg., scored, in bottles of 100 and 1000.

Complete literature available on request from Professional Services Dept. PML.

BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, N.Y.

A Valuable Contribution To Medical Literature

A DEFINITIVE STUDY ON DOUCHING



The Vaginal Douche

Observations on Some of Its Effects

JOHN HERMAN LONG, M.D.
MERVYN LEE CAREY, M.D.
ANDRE E. HELLEGERS, M.D.
MARK P. PENTECOST, M.D.
BALTIMORE, MARYLAND

From The Department of Gynecology and Obstetrics, The Johns Hopkins University and Hospital

A SEARCH OF MEDICAL LITERATURE REVEALS NO COMPARABLE OBJECTIVE EVALUATION OF THE SUBJECT.

The authors state at the outset,

"Each physician has his own idea of the value or harm of the vaginal douche and many have expressed such ideas in writing. Such opinions have been arrived at without any intensive investigation or observation of subjects using douches as compared to those not using them. The purpose of this study is to report our observations on three groups of patients, one taking no douches, a second douching with a medicated solution* and a third douching with plain water."[1]

1. West. J. Surg., Obsts. & Gynec.: *71*:122-127, 1963

*The medicinal powder used in this study was META CINE®, a scientifically formulated preparation containing: papain, lactose, citric acid, methyl salicylate, eucalyptol, menthol and chlorothymol.

OBSERVATIONS BASED ON EXTENSIVE AND THOROUGH EXAMINATION SCHEDULE.

"One hundred patients were selected at random, regardless of their chief complaint, from the general population attending the Out-Patient Gynecology Clinic of The Johns Hopkins Hospital. Those selected were reexamined at 1, 3, 6, 9 and 12 months after the initial visit."

"At intervals patients were switched to the regimen of another group so that comparison of the effect of douching or not douching might be made in the same individual."

Three years were required to complete the study.

An evaluation of the objective findings of the study demonstrates that douching with META CINE® had the following effects on vaginal secretion:

- increased Doderlein organisms,
- proved effective in lowering WBC counts,
- proved effective in increasing glycogen content.

META CINE® was found to be a good antagonist to vaginal discharge and irritation—and also proved effective in reducing cervicitis.

No untoward effects of douching were encountered in the study.

Reprints of the complete study and professional samples of Meta Cine are available on request.

BRAYTEN PHARMACEUTICAL COMPANY • *Chattanooga 9, Tennessee*

REFER EYE PATIENTS
TO AN
EYE PHYSICIAN

By so doing, you will be assured of a complete diagnosis of your patients' eyes.

Guild Opticians complete the cycle for Professional Service.

GUILD OF PRESCRIPTION OPTICIANS OF AMERICA

BE SAFE—BE SURE

SEE

YOUR GUILD OPTICIAN

FOR

THE BEST SERVICE

EYE PHYSICIANS: Please Note—

Your prescriptions for glasses are "SAFE" when referred to a Guild Optician. Bound by the code of Ethics to uphold the highest standards in optical service.

APPALACHIAN HALL
Established 1916

Asheville North Carolina



An Institution for the diagnosis and treatment of Psychiatric and Neurological illnesses, rest, convalescence, drug and alcohol habituation.
Insulin Coma, Electroshock and Psychotherapy are employed. The Institution is equipped with complete laboratory facilities including electroencephalography and X-ray.
Appalachian Hall is located in Asheville, North Carolina, a resort town, which justly claims an all around climate for health and comfort. There are ample facilities for classification of patients, rooms single or en suite.

WM. RAY GRIFFIN, JR., M.D.
ROBERT A. GRIFFIN, M.D.
MARK A. GRIFFIN, SR., M.D.
MARK A. GRIFFIN, JR., M.D.

For rates and further information write
Appalachian Hall, Asheville, N. C.



In Sprains, Strains and Muscle Spasm, 'Soma' Compound

numbs the pain...not the patient

A potent analgesic and a superior muscle relaxant

1. A sprain or fracture is not a big clinical problem—but it does hurt. And if there is housework to do and kids to mind, the patient needs something to numb the pain.

2. A.P.C. compounds have limited usefulness; and the patient can buy them without your prescription. Unfortunately, most of them are too mild to be effective for sprains—and more potent products too often make the patient feel 'dopey'.

3. 'Soma' Compound is ideal in these cases. Since it contains both 'Soma' (carisoprodol) and acetophenetidin it is both a potent analgesic and a superior muscle relaxant; it also contains caffeine to offset any drowsiness *("numbs the pain...not the patient")*.

4. Why not try 'Soma' Compound? Dosage is 1 or 2 tablets q.i.d. For more severe pain, try 'Soma' Compound + Codeine. Dosage: 1 or 2 tablets q.i.d.

5. Hypersensitivity to carisoprodol may occur rarely. Codeine may produce addiction, nausea, vomiting, constipation or miosis.

Soma® Compound

carisoprodol 200 mg., acetophenetidin 160 mg., caffeine 32 mg.

Soma® Compound + Codeine

carisoprodol 200 mg., acetophenetidin 160 mg., caffeine 32 mg., codeine phosphate 16 mg. (Warning—may be habit forming.)

®WALLACE LABORATORIES / *Cranbury, N.J.*

CSQ-9193


just
turned
hypertensive



a 15 mm. Hg. drop in diastolic pressure would also suit her very well

for suitably gradual, physiologic hypotensive treatment

HYDROMOX®

QUINETHAZONE·TABLETS

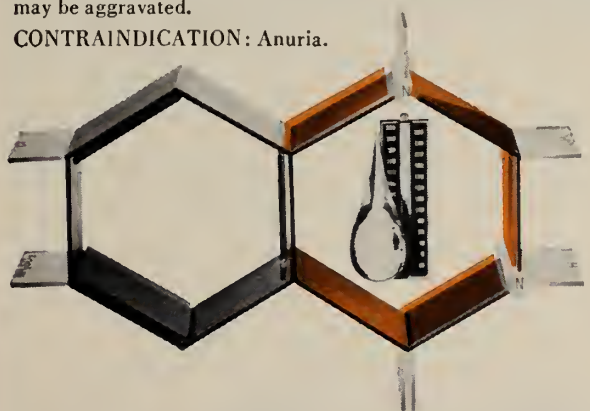
antihypertensive diuretic

HYDROMOX Quinethazone is excellent for use in early hypertension. Extremely well tolerated, the average reported reduction in diastolic pressure is 15 mm. Hg.,[1,2] just right for patients with mild to moderate diastolic elevations. Systolic pressure lowered accordingly. A convenient, single daily dose of one to two 50 mg. tablets is usually sufficient.

INDICATED in hypertension with or without edema, and in all types of edema involving salt retention. May be helpful in some cases of lymphedema, idiopathic edema and edema due to venous obstruction.

SIDE EFFECTS: Skin rash (rare), gastrointestinal disturbances, weakness and dizziness, seldom so severe that drug should be stopped. Generally, the adverse effects sometimes associated with the thiazide diuretics are possible. Pre-existing electrolyte abnormalities may be aggravated.

CONTRAINDICATION: Anuria.



1. Steigmann, F., and Griffin, R.: Evaluation of Quinethazone, a New Diuretic. *J. Amer. Geriat. Soc.* 11:945 (Oct.) 1963.
2. Schwartz, M.: Office Evaluation of a New Diuretic in Patients with Hypertensive Diseases. Scientific Exhibit Presented at the Clinical Meeting of the American Medical Association, Los Angeles, California, Nov. 25-28, 1962.

Lederle

LEDERLE LABORATORIES,
A Division of AMERICAN CYANAMID COMPANY,
Pearl River, New York

6276-4



Doctor, you can take it with you!



THE BURDICK EK-III **DUAL-SPEED ELECTROCARDIOGRAPH**

- 26½ pounds light, including all accessories and carrying case! Ideal for office or bedside use
- 25 or 50 mm. speed — an accurate record for an accurate diagnosis
- frequency response greatly in excess of minimum A.M.A. standards
- top-loading paper drive eliminates tedious paper-threading adjustments

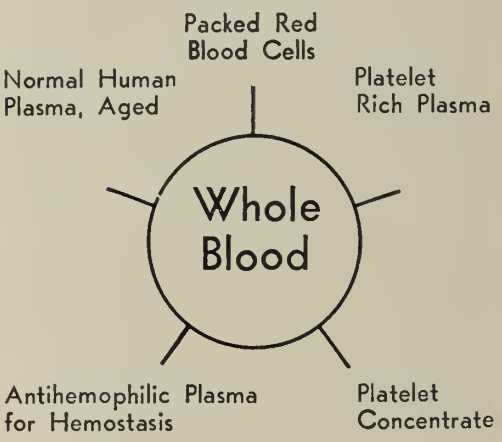
Burdick

THE BURDICK CORPORATION
MILTON, WISCONSIN
Branch Offices: New York • Chicago • Atlanta • Los Angeles
Dealers in all principal cities

KAY SURGICAL, INC.
1144 Madison Ave. Memphis, Tenn.

Follow the trend to

BLOOD COMPONENT THERAPY



Best for the patient and More Economical.

All available from

BLOOD BANK FOUNDATION

1921 Broadway ALpine 4-3551
NASHVILLE, TENNESSEE

TENNESSEE VALLEY MEDICAL ASSEMBLY

(Sponsored by the Chattanooga and Hamilton County Medical Society)

TIVOLI THEATER, CHATTANOOGA, TENNESSEE

Monday, September 28, and Tuesday, September 29, 1964

12TH ANNUAL ASSEMBLY

A.M.

7:30 REGISTRATION BEGINS — MONDAY, SEPTEMBER 28, 1964

9:00 PHILIP THOREK, M.D., Prof. Surg., Cook County Graduate School of Medicine, Chicago, Ill., *"Gastrointestinal Bleeding—Diagnosis and Treatment."*

9:30 JOSEPH H. HOLMES, M.D., Prof. of Medicine, University of Colorado, Denver, Colorado, *"Treatment of Chronic Renal Disease and Renal Transplant."*

10:00-10:30 A.M.—INTERMISSION

10:30 THOMAS J. KIRBY, M.D., Cons. in Ophthalmology, Mayo Clinic, Rochester, Minn., *"External Disease of the Eye."*

11:00 GORDON MCHARDY, M.D., Clin. Prof. of Medicine, Louisiana State University Medical School, New Orleans, La., *"Critical Evaluation of Gastric Hypothermia in the Management of Duodenal Ulcer."*

11:30 JOHN C. WEED, M.D., Prof. Obstetrics and Gynecology, Tulane University, New Orleans, La., *"Management of Pelvic Relaxation In Women."*

NOON

2:00 RICHARD W. VILTER, M.D., Prof. of Medicine, University of Cincinnati College of Medicine, Cincinnati, Ohio, *"Diagnosis and Treatment of Refractory Anemias."*

2:30 FRANK D. LATHROP, M.D., EENT Dept., Lahey Clinic, Boston, Mass., *"Management of Chronic Inflammation of the Salivary Glands."*

3:00-3:30 P.M.—INTERMISSION

3:30 CORNELIUS E. SEDGWICK, M.D., Surgical Staff, Lahey Clinic, Boston, Mass., *"Portal Hypertension."*

4:00 ROBERT L. EGAN, M.D., Asst. Prof. of Radiology, University of Texas Postgraduate School of Medicine, Houston, Texas, *"Mammography in the Diagnosis of Breast Diseases."*

4:30 *Question and Answer Period.*

REGISTRATION FEE $15.00

BANQUET TICKET $7.50

TUESDAY, SEPTEMBER 29, 1964

A.M.

9:00 MURRAY M. COPELAND, M.D., Assoc. Dir., (Education), M. D. Anderson Hospital and Tumor Institute, Houston, Texas, *"The Challenge of the Biologic Aspects of Cancer of the Breast."*

9:30 JAMES G. HUGHES, M.D., Prof. of Pediatrics, University of Tennessee Medical School, Memphis, Tenn., *"The Treatment of the Epileptic Child."*

10:00-10:30 A.M.—INTERMISSION

10:30 ABRAHAM F. LASH, M.D., Prof. of Gynecology, Cook County Hospital, Postgraduate School of Medicine, Chicago, Ill., *"The Incompetent Internal os of the Cervix, A Factor in Second Trimester Abortion."*

11:00 EDGAR F. FINCHER, M.D., Prof. Neurosurgery and Head of Department, Emory University, Atlanta, Ga., *"Chronic Subdural Hematomas."*

11:30 JOHN H. GIBBON, JR., M.D., Samuel D. Gross Prof. of Surgery and Head of Department of Surgery, Jefferson Medical College, Philadelphia, Pa., *"Changing Concepts in the Therapy of Cancer of the Esophagus."*

NOON

2:00 EMERSON DAY, M.D., Medical Division, Strang Clinic, New York, N. Y., *"Cancer Check-up In Private Practice."*

2:30 WILLIAM B. KANNEL, M.D., Associate Director, Department of Health Education and Welfare, Framingham, Mass., *"Factors in the Development of Clinical Atherosclerotic Disease."*

3:00-3:30 P.M.—INTERMISSION

3:30 DONALD J. BIRMINGHAM, M.D., Medical Director and Chief, Dermatology Section, Research and Technical Services Branch, Department of Health, Education and Welfare, Cincinnati, Ohio, *"Occupational Diseases of the Skin."*

4:00 GERRIT W. H. SCHEPERS, M.D., Director, Institute of Industrial and Forensic Medicine, Washington, D. C., *"Man Made Diseases."*

4:30 *Question and Answer Period.*



Putting the cap on a bottle sounds simple. Just make it tight enough to keep the contents in, prevent leakage, and protect the product; loose enough to be opened with ease. However, that isn't quite as simple as it sounds. ■ At Eli Lilly and Company, there are exact-tightness specifications for the cap of every bottle. Capping machines are carefully adjusted to apply just the right amount of torque (or twist) to tighten the caps. Then the tightness of the caps is double-checked . . . just to be sure. ■ That's where the torque tester comes in. At least once every fifteen minutes, five bottles are tested as they come out of the capping machine. They are placed on the torque tester, and the twist on the caps is measured . . . just one more of the many controls that add immeasurably to the quality of the finished product.

Eli Lilly and Company • Indianapolis 6, Indiana, U.S.A.

Lilly

400654

Journal of the Tennessee Medical Association

OWNED AND PUBLISHED BY THE ASSOCIATION

Volume 57 JULY, 1964 Number 7

The Selection of Medical Students*

*M. K. CALLISON, M.D., and F. L. ROBERTS, M.D., Memphis, Tenn.

Those in medical education have many questions put to them by members of the practicing profession, either because of interest of their own children for a career in medicine, or because of interest of other prospective medical students who seek a doctor's advice. There is an immense amount of misunderstanding and ignorance among practitioners as to the admission methods used by medical schools. The authors have done a great service in making available the thinking which determines admission to medical schools.

Most papers dealing with admissions policies of American medical colleges have appeared in journals specializing in medical education. These journals are not widely read by medical practitioners. The authors believe that the physicians of Tennessee should be familiar with the admissions policies of their own state school since their advice is frequently sought by prospective medical students of their communities. Contrary to usual opinion, the admissions policies are not arbitrary or rigid. There is considerable flexibility and judgment exercised by the admissions committees within the limits of certain guidelines. At The University of Tennessee College of Medicine, these policies have resulted from many years' experience with thousands of medical students. The policies are also influenced by the experience of other medical schools throughout the country. The aim of any admissions policy is to select medical students who will have the best chance of completing their medical education and to select those whom it is hoped will become conscientious, dedicated and competent physicians. The cost of medical education is too high and the psychologic trauma to the student, his family, his classmates and the faculty is too great to admit a student concerning whom there is serious doubt that he can complete successfully the rigorous medical curriculum. The several considerations in the selection of medical students are discussed in the present communication along with data derived from our own experience which has influenced our policy decisions.

The factors taken into account are the candidate's premedical academic record, age, scores on the Medical College Admission Test, the recommendation by the premedical advisory committee, his residence status, and to some extent the college or university in which his premedical education was obtained, and impressions gained in a personal interview by a representative of the college. These criteria are used by virtually all medical schools in the United States. Although the selection methods are unscientific, they seem to be reasonably successful. The academic failure rate among medical students is in the order of 5% nationally. The dropout rate for reasons other than academic failure is about 5 per cent. This gives a total attrition rate in the order of 9 to 11 per cent. The University of Tennessee's experience conforms closely to these national rates. Our overall attrition rate last year was 12 per cent.

Premedical Gradepoint Average

Most medical educators believe that the premedical grade point average of the applicant forms the best single criterion for prediction of success in medical school. Schwartzman[1] states that there is a significant correlation between premedical grades and rank in the medical school in the first three years. Others have confirmed this

*Dean and Associate Dean respectively of The University of Tennessee College of Medicine, Memphis, Tenn.

but it is generally believed that the correlation is not as great in the clinical years. At The University of Tennessee, the grade point average is adjusted by college according to the average scores made by their premedical students on the Medical College Admission Test. The maximum penalty or bonus is 4 points. The numerical grades are calculated on the basis of an A-98, B-90, C-80, D-72 and F-60. All F's are counted in arriving at a final average. When a course is repeated, both the original grade and the grade on repetition is included. English and the science grades are calculated separately since the typical good medical student seems to excel in these courses. For purposes of admission of Tennesseans a grade point average of at least 85 is required. The applicant must also have at least an 85 average on the science and English courses. Out-of-state applicants are rarely accepted with a grade point average of less than 90.

The Medical College Admission Test

The Medical College Admission Test was first given in 1930. It has been used by The University of Tennessee College of Medicine since then. The Test has been the subject of great controversy by medical educators, and it is generally held that only the extremes in scores are highly predictive. The Test, hereinafter referred to as the MCAT, is in four parts—*verbal ability, quantitation, general information,* and *science achievement.* Buehler and Trainor[2] extol the predictive value of the MCAT in their paper. They stated that when both the quantitative section and the scientific section scores are above 500 (range 200-800) the predictor success is better than either score alone. In our experience, the greatest correlation is with the science achievement portion of the Test alone. Hill[3] considers the MCAT scores, particularly the quantitative and scientific scores as equal to premedical grades in predictive value. At The University of Tennessee, the Admissions Committee has adopted a cutoff of 400 below which no student is accepted. A science achievement score below 455 is considered risky. The average scores of students throughout the country who take the test is 500, and the average of all students accepted by medical schools throughout the country is about 530. Generally speaking, students in the South achieve somewhat lower scores on the MCAT than elsewhere. In the last several years this gap has been closing as our secondary schools' and colleges' programs have improved.

Resident Status

The policy of The University of Tennessee is to accept all qualified Tennessee residents and if any places remain to accept the best qualified available out-of-state students. Some preference is given students in our neighboring states. For purposes of admission, Tennessee residence means that the student's parents live and pay taxes in Tennessee, or that the student has moved to Tennessee for the purpose of making a living and not primarily for the purpose of obtaining an education. Out-of-state applicants whose fathers are alumni of the College of Medicine are given preference over other out-of-state applicants. At the present time, approximately 25% of the student body are out-of-state students.

Age

Our studies along with studies in other schools have shown that the failure rate in medical school increases rapidly after the age of 30. Accordingly, we do not encourage applications from students beyond that age, and only in exceptional cases are such students accepted. The tables which follow are derived from our experience in explaining the reasons for this policy.

Recommendations from the Premedical Advisory Committees

Most colleges and universities now have standing Preprofessional Advisory Committees who work closely with the premedical students and the admissions officers and deans of the medical schools. They are knowledgeable in regard to the philosophies of premedical education and the general requirements of the various medical schools. The University of Tennessee College of Medicine has had two conferences in recent years at which representatives from about 35 colleges and universities have been in attendance. These conferences were for the purpose of discussing premedical education.

It is now held by virtually all medical educators that a college degree is to be desired in a medical student. Our requirements are only three years college education, but at the present time somewhat over 50% of our students have degrees upon admission.

The Premedical Advisory Committee provides information which is otherwise unobtainable to the medical college admissions committees. Such information as honesty, integrity, and character, as well as academic and intellectual abilities are provided. In 1956, Ceithaml[4] polled individual members of admissions committees throughout the country with reference to the statement that admissions committees first focus attention on intellectual ability, and only later on nonintellectual characteristics. He received 534 replies which was 82% of those queried. Most stated that character and integrity were more important than intellectual ability, but admitted having the least confidence in their ability to evaluate these characteristics. Character and integrity are value judgments which cannot be assessed in the absence of overt acts which either lower or elevate one's opinion of the person. Character defects are not inconsistent with high scholastic success no matter how much they may be deplored in a medical student. Evidence of cheating in college is sufficient reason to exclude an applicant from admission to a medical college. At The University of Tennessee College of Medicine, evidence of character defects or moral turpitude are considered by the Executive Committee of the Medical Units, and a judgment of acceptability or nonacceptability is passed on to the Admissions Committee.

An intangible which is impossible to evaluate but most important in a student's progress is motivation. Again the Preprofessional Advisory Committee often is able to provide information which helps in evaluating motivation. No psychologic tests have thus far proved reliable in the determination of this factor.

Personal Interview

Essentially the interview is used to size up the applicant as to appearance, personality, attitude and to gain some impressions as to the applicant's intelligence, communication skills and motivations. Such information as speech and hearing defects, personality peculiarities, and general level of culture become evident to the interviewer. The interviewer frequently delves into the reading habits of the prospect. Students whose reading for pleasure includes nothing heavier than sports journals are unlikely to become good medical students. Occasionally, overt evidence of psychotic behavior is suspected on the personal interview. When the interviewer is suspicious, the applicant is referred for psychologic testing or psychiatric interview. Most admissions committees in medical schools include a psychologist or psychiatrist for this purpose. Since nervous disorders comprise the single greatest cause of nonacademic dropouts in medical schools, the uncovering of such behavior traits in applicants is doubly important. Some schools utilize the Minnesota Multiphasic Personality Index as an objective method of uncovering personality and psychiatric aberrations. It is our intent to use this test on an experimental basis on selected groups of applicants to gain experience with it. The personal interview, particularly on the campus, serves the purpose of giving the applicant an opportunity to find out more about the school. Since our student body is drawn from a wide geographical area and the school is not centrally located in the state, many of the interviews are carried out by interested alumni who represent the Admissions Committee.

Since all recognize the fallibility of the personal interview as a predictor, it is rare that a candidate is either accepted or rejected on the basis of the interview alone. With all its limitations, the interview still has a distinct value when weighed with other factors mentioned above.

A word might be said with reference to recommendations. We have often found that the more letters of recommendation a candidate has, the poorer prospect he is. Other than recommendations from the Premedical Advisory Committees, those from friends, relatives and politicians may be discounted. A recommendation not to accept a student has a great deal more value than a laudatory epistle.

Table 1 shows the three year moving average of failures by premedical grades among 1,445 students. The data are shown graphically in figure 1. In many classes there are no failures among students with a premedical average of 91 or higher. Such was the case for the classes which entered in 1961. The slight upswing in figure 1 results from the scholastic failure of two students who had premedical averages of 92 and 95.

Table 1

The Distribution of 1,445 Students Entering The University of Tennessee College of Medicine by Adjusted Premedical Averages and Failure Rate

Adjusted Premedical Averages	*Number in Sample*	*Per Cent Failures*	*Moving 3 Year Average Failures*
85	235	17.1	
85	206	13.8	13.8
86	144	8.4	11.1
87	149	10.2	8.3
88	122	5.8	6.9
89	136	4.4	4.2
90	97	2.0	3.0
91	90	2.2	1.9
92	75	1.3	1.3
93	64	0	0.5
94	50	0	0.6
95	38	2.6	0.7
96	39	0	
Totals	1,445	7.9	

Table 2 presents other evidence of the high correlation between premedical grades and success (or failure) in medical school. Students entering with grades of 85 or lower had significantly higher failure rates than those entering with higher grades. Likewise, those entering with grades of 90 or better had very low failure rates.

Table 2

Distribution of Scholastic Failures by Premedical Grades

Premedical Grade	*Number in Sample*	*Per Cent of Scholastic Failures*
85 or less	439	15.6
86-87	292	9.3
88-89	259	5.0
90 or over	455	1.3
Totals	1,445	7.9

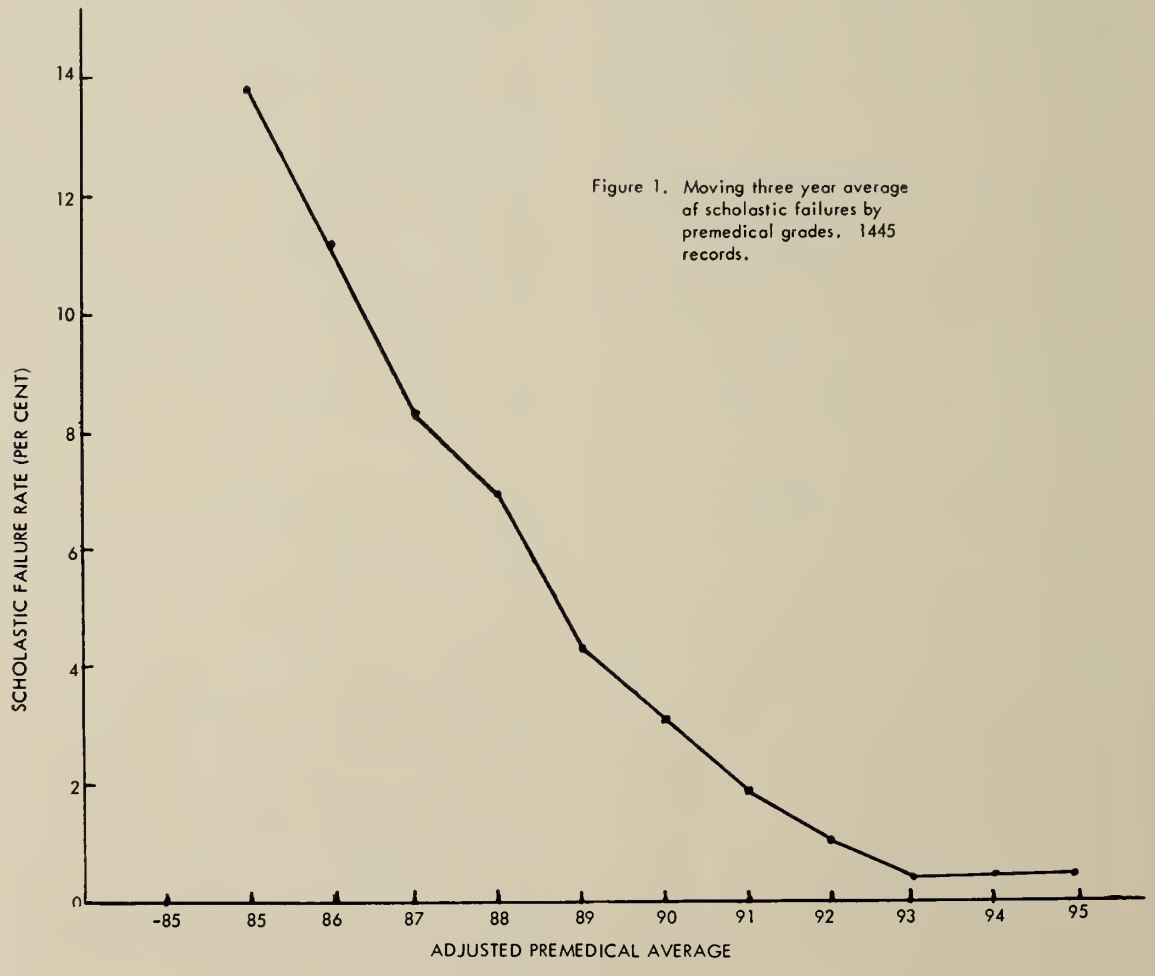


Figure 1. Moving three year average of scholastic failures by premedical grades. 1445 records.

Fig. 1.

For the 199 students entering in 1961, those who progressed regularly—without repeating any quarter—had a premedical average of 88.69. Those who were irregular in the sense of repeating quarters had a premedical average of 86.68 while the 21 scholastic failures had an average of 86.51. Since the sample is small, the differences are not statistically significant, but do show the trend.

An analysis of the records of 394 students entering the College of Medicine in 1957 and 1958 shows a high correlation between premedical grades and class rank in medical school. Using Alpha Omega Alpha membership (those in the upper 15% of the class) as an indicator of rank, the table below shows that a significantly higher percentage of students with premedical averages of 89 and higher are elected to Alpha Omega Alpha than those with premedical grades of below 89.

Table 3

DISTRIBUTION OF 394 STUDENTS AS TO PREMEDICAL GRADES AND ELECTION TO ALPHA OMEGA ALPHA

Grade	*Number*	*AOA*
86 and lower	114	5.26
87 and 88	98	7.10
89 and over	182	23.0

It is generally agreed that age plays an important role in the success or failure of medical students. Johnson[5] states that 33% of the students at the State University of New York at Syracuse who were more than 28 years of age at entrance, failed. This particular percentage has a standard error of 12% and taken alone would prove very little. However, the experience at Syracuse is also the experience of other schools and there is little doubt that the older students have a significantly higher failure rate than do the younger students. Schwartzman et al[1] state that students under 25 years of age have significantly lower failure rates than do those aged 25 years or older. They say that this difference disappears in the fourth year of medical schools. In our experience, the significant difference occurs at 28 years of age and older. The difference is four times its standard error.

Buehler and Trainer[2] state that the mean age of "under achievers" is 5 years greater than that of the "high achievers." Morris and Miller[6] say that younger students are more successful than older students, and that withdrawals from school are more frequent in the older age group. In our experience, voluntary withdrawals have not been more frequent among the older students. In our sample, there were 62 students 33 years of age or older at time of entrance to the College of Medicine and only two of these withdrew from school.

There is some difficulty in assessing accurately the real failure rate among older students because the number is small. In a random sample of 1,445 students entering The University of Tennessee College of Medicine, there were 91 who were 31 years of age or older at the time of entrance. There were 26 scholastic failures in this group or 28 per cent. This is in marked contrast with the 7.3% of failures in the group under 31 years of age. This difference is statistically significant at the .001 level.

Table 4 shows the distribution of 1,445 students by age and failure rate. In order to minimize the wide sample fluctuations resulting from small numbers, a three year moving average was taken. The data are shown graphically in figure 2. The dotted lines are the observed values and the solid line is a second degree curve ($y = a + bx + cx^2$) fitted to the data. The rapid upswing in the failure rate after 28 years of age is well shown. There was one interesting feature of the sample, namely that there was not a single failure in the 27 year age group. This

Table 4

DISTRIBUTION OF 1,417 REGISTRANTS IN THE UNIVERSITY OF TENNESSEE COLLEGE OF MEDICINE ACCORDING TO AGE AND FAILURE RATE

Age at Entrance	*Number of Registrants*	*Number of Failures*	*Per Cent Failures*	*3 Year Moving Average Failures*
21	577	37	6.4	
22	232	10	4.3	6.3
23	137	13	9.5	7.4
24	63	9	14.3	10.3
25	81	7	8.6	10.5
26	94	9	9.6	7.4
27	41	0	0	6.2
28	41	2	4.87	8.6
29	34	8	23.5	12.5
30	29	3	10.3	14.0
31	30	2	6.6	10.6
32	16	3	18.7	10.9
33	9	1	11.1	24.4
34	16	6	37.5	31.0
35	4	2	50.0	30.3
36	13	2	15.4	
Totals	1,417	114	8.0	

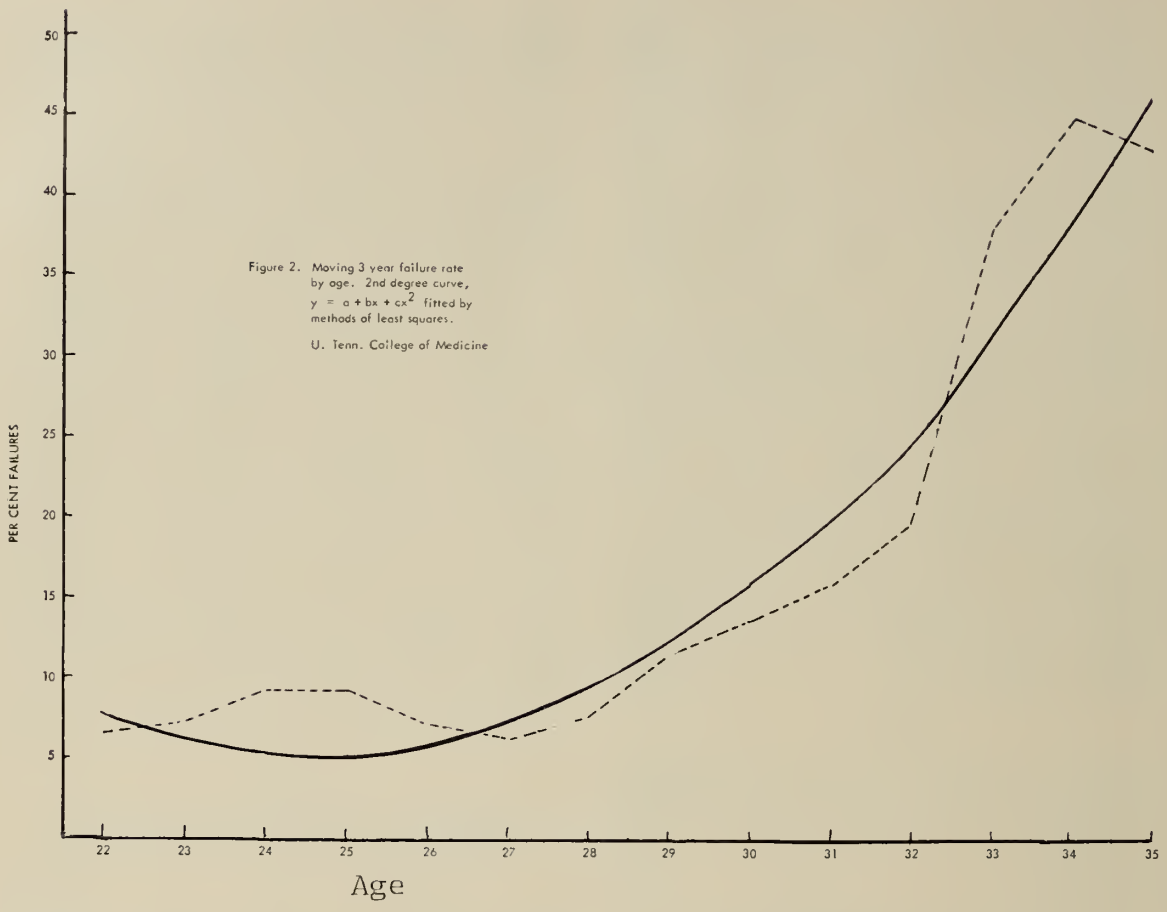


FIG. 2.

tended to lower the value in the 25 to 29 year age group because the zero value appears three times.

There are many more data to support the premise that the older students have higher failure rates. For the 199 students who entered our College of Medicine in 1961, the failure rate for the students 28 years of age or older at time of entrance was 26% as compared with 9.6% for those under 28 years of age. For 397 students entering in 1957 and 1958, the mean age of the failures was 26.4 years as against 22.9 years for the successful students. The median ages were 26 years and 22 years respectively.

It is apparent that the overall failure rate among students of 32 years and older at The University of Tennessee College of Medicine is close to 35%, and in some samples approached 45 per cent. There are probably many factors both of a physiologic and psychologic nature which contribute to this phenomenon.

It is because of these findings that the Admissions Committee of this school will not admit a student who is more than 30 years of age, except under most unusual circumstances.

All but five American medical colleges require that candidates for admission take the Medical College Admission Test (MACT). It is estimated that approximately 37% of admissions committee members place great importance on the test and 56% consider the test to be of some importance. It must be admitted that cultural background has much to do with a student's performance on objective tests such as the MCAT. There are some students who are not good "test takers" and whose low score on the MCAT misleads the admissions committee.

Ever since the first aptitude test for medical school applicants was developed in 1930, there has been an ocean of words for and against the test. In our opinion, much of the difficulty associated with the appraisal of the value of the MCAT lies in the misunderstanding of the purpose of the test.

Stalnaker in 1954[7] stated, "The MCAT does not reflect interest in the study of medicine (presumably an important factor in attaining success in medical school), adjustment to the medical school's method of education, financial resources, the family situation, ambition, drive, or the ability and desire to apply one's self to the task at hand. . . . In diagnosing the illness of the sick, logic would dictate physicians of high intellectual competence will be right more frequently than less talented physicians. . . . Thus it is understandable that admissions committees, when there is a choice, will select a bright applicant over a less bright one. The MCAT scores help tremendously in supplying the basic data on which a wise decision can be made."

It has been stated by Sanazara and Hutchins[8] there is only one nationally available reliable measure of knowledge in the medical sciences—the National Board Examinations, Part I and Part II. In a study of 13 schools and 1,098 students, the correlation coefficients for Part I of the National Board grades and MCAT scores were 0.33 for verbal ability; 0.31 for quantitative ability; 0.34 for modern society and 0.51 for science achievement. These coefficients were statistically significant at the .001 level. The same coefficients for the individual schools varied from essentially zero to significant correlation. The highest coefficients were in science achievement.

In analysis of the records of 17 schools and 1,427 students the correlation coefficients for MCAT scores and grades on Part II of the National Board were statistically significant at the .001 level and again the highest correlation was with the science achievement. The same wide variations were found between the individual schools.

We have found that the science achievement score on the MCAT is significantly related to the grades on Part I of the National Board Examinations. In a random sample of 100 from among approximately 500 students taking Part I of the National Board Examination, there were 25 with grades below 75. Of these, 17 had scores below 455 on the MCAT (science achievement) and 8 had 455 or higher. There were 23 successful students with scores below 455 and 52 successful students with scores of 455 or more. Using the Chi Square Test and null hypothesis, these differences are statistically significant at the .01 level.

In the experience of The University of Tennessee, the science achievement portion of the MCAT is related to the failure rate. There were 394 students admitted in 1957 and 1958 whose records are complete—that is, they have graduated or failed. The failure rate for 232 with science achievement scores of 455 or higher was 3.4% and the rate for 162 with scores below 455 was 10.5 per cent. The standard error of the differences between these percentages is 2.6% and the difference is 7.1% giving a critical ratio of 2.73 and p is less than .01—in short, the difference is statistically significant.

It is of interest to note that the science achievement score on the MCAT averaged 445 for failing students, 480 for successful students and 520 for those elected to Alpha Omega Alpha, the honorary scholastic fraternity for medical students.

We believe that so far as The University of Tennessee College of Medicine is concerned, the MCAT and especially the science achievement section is helpful as an aid for selecting students.

Conclusion

To test the validity of the methods of selection by medical school admission committees, one needs an evaluation of the graduates' performance ten years after graduation. Such evaluations are very difficult to obtain. The North Carolina study on the quality of practice by general practitioners seemed to indicate that quality is inherent in the *kind* of person the physician is rather than to where he graduated. If this is so, and we believe it is, the work of admissions committees becomes doubly important. The quality of doctors graduated is probably directly related to the quality of intake by medical colleges. This is why admissions committees must continue to evaluate and refine their methods of selection, and why they must be allowed to do their work with complete objectivity.

References

1. Schwartzman, A. E., Hunter, R. C. A. and Lohrenz, J. G.: Factors Related to Medical School Achievement, J. M. Educ. 37:749, 1962.

2. Buehler, John A. and Trainer, Joseph B.: Prediction of Medical School Performance and its Relationship to Achievement, J. M. Educ. 37:10, 1962.

3. Hill, Joseph K.: Assessment of Intellectual Promise for Medical School, J. M. Educ. 34:959, 1959.

4. Ceithaml, Joseph: Student Selection in United States Medical Schools, J. M. Educ. 37:171, 1962

5. Johnson, Davis G.: A Multifactor Method of Evaluating Medical School Applicants, J. Med. Educ. 37:10, 1962.

6. Morris, D. P. and Miller, C.: The Relationship between Chronological Age and Success in Medical School, J. Med. Educ. 29:38, 1954.

7. Stalnaker, J. M.: The Medical College Admission Test, J. M. Educ. 29:43, 1954.

8. Sanazara, Paul J. and Hutchins, Edwin B.: The Origin and Rationale of the Medical College Admission Test, J. Med. 38:1044, 1963.

Histoplasma Meningitis: A Study of Five Adult Patients—B. Tynes, J. C. Crutcher, and J. P. Utz. Ann. Intern. Med. 59:615 (Nov.), 1963.

Meningitis as a manifestation of histoplasmosis has been rarely reported. Five cases are presented. *Histoplasma capsulation* was isolated in culture from the cerebrospinal fluid (CSF) of four of the patients and from the sputum of the fifth. All patients had lymphocytic meningitis with elevated protein (100-655 mg/100 ml); four had elevated CSF pressure, but only two had depressed glucose values. The spectrum of neurological illness varied from headache to confusion, localizing signs, and coma. Stiff neck was present in only two. Ventriculography (one patient), pneumoencephalography (two), cerebral arteriography (two), and radioactive scanning (three) were performed in addition to lumbar puncture, cranial roentgenography, and electroencephalography. Chest films were negative in three patients; one had soft peribronchial infiltration bilaterally, and the remaining patient had a cavity in the left upper lobe. The complement fixation tests were positive in three patients and negative in one. CSF complement fixation was positive in one patient. Histoplasmin skin tests were negative in the two patients with positive blood and bone marrow cultures. Amphotericin B was considered definitive therapy, although courses of B-diethylamino fencholate (MRD-112), ethyl vanillate, nicetin, sulfadiazine, and X-5079C were administered at various times. Three patients appear to have recovered; one died following mental deterioration and cachexia 20 months after treatment, and the remaining patient is asymptomatic, but abnormal CSF findings with positive culture persist.

Physical Medicine — Its Scope and Application in Medical Practice*

ODON F. VON WERSSOWETZ, M.D., Chattanooga, Tenn.

Simple physical remedies have been included in the management of the sick and disabled from the beginning of recorded history. Although these remedies were applied empirically, they have provided innumerable demonstrations of their ability to relieve pain, alleviate stress and enhance physical recuperation. It was not until this century that a systematic application of physical agents, based on scientific evidence of their physiologic properties and reactions, was introduced in medical practice. The most significant factor that has evolved is the detailed consideration of what each physical agent is capable of producing and altering in the body.

Thus, the scope of physical medicine is applied biophysics, practiced against a broad background of general medicine. Its tools, among others, include the fields of physical therapy, occupational therapy and the broad area of rehabilitation. It is applicable to diagnosis and treatment of a wide range of medical and surgical disabilities.

One of the best known diagnostic procedures, based on its physical properties, is electrodiagnosis. This test can determine the status of peripheral nerves by use of a properly selected current which is transmitted to a nerve or muscle to evoke a contraction. The type of current used and the characteristics of the reaction will usually indicate the type and site of the involvement or the progress of recovery. Periodic strength-duration curves and other tests can offer information of prognostic value in paralysis, not possible without these methods. The prognosis in Bell's palsy can be predicted weeks before it occurs with so simple a device as a faradic coil. Hysterical paralysis is easily differentiated by electrical stimulation. Electromyography, which in its basic principle is similar to electrocardiography, records the current evoked in muscle contraction and the type of response is indicative of the causative lesions. The electromyographic investigation of a symptomatic ruptured disc is more accurate in its localization than myelogram.

Other diagnostic procedures are:

(1) Manual muscle test which indicates the status of the neuromuscular system and the pattern of its involvement. This helps in differential diagnosis, provides basis for prescription of exercises, determines the progress of treatment, forms the basis for reconstructive surgery, as tendon transfer, and helps in determining the prognosis.

(2) Test of functional activities is a series of physical achievements designed to evaluate objectively the patient's ability to perform certain common activities of daily living in a normal environment and to ascertain his capacity for independent function.

(3) Cold pressor test which is the reaction of neurogenic reflexes to application of cold to control and stabilize the systemic blood pressure. It is positive in essential hypertension. (Hines and Brown.)

(4) Landis-Gibbon test in which local heat to one upper segment of the body will cause general peripheral vasodilation, showing remote temperature changes at the periphery of lower extremities which is measured by thermocouples. This is of value in the diagnosis of peripheral vascular diseases.

Other new tests are being perfected at all times. One is ultrasonoscopy which records sound echoes and is able to outline a soft tissue mass, which may not be visualized otherwise by roentgenograms. All tests by physical means are, like other tests, only an adjunct to clinical evaluation and are supportive or confirmative in nature. Yet, to perform these tests intelligently, some understanding of their significance, as it relates to biophysics, neurophysiology and disease is required.

There is still an unfortunate impression, widely held, that physical treatment is only useful in orthopedic disabilities or traumatic surgery. This misapprehension largely derives from the fact that modern methods of physical treatment were popularized during World War I, by the success-

ful and brilliant work of Sir Robert Jones, a British orthopedic surgeon. The experience during the past two decades indicates that the same principles for treatment and prevention of permanent impairment, whenever possible, apply to a number of other medical and surgical disabilities. Encouraging results are being obtained by the scientific application of these principles to a variety of chest complaints including emphysema, asthma and after chest surgery, such as lobectomy; to recovery of abdominal muscle tone and prevention of liability to hernia after laparotomy or childbirth; to the rapid and complete recovery of the mobility of the fingers and hand after septic infections and burns; to the treatment of most types of arthritis, rheumatic disorders and other nonspecific musculoskeletal conditions, such as low back derangement and involvements of the cervical spine or shoulder; to the partial or complete restoration of function after injury or disease of the neuromuscular system, as in paraplegia, quadriplegia, hemiplegia, poliomyelitis, multiple sclerosis, muscular dystrophies, cerebral palsy and others; in the development of circulatory compensation and prevention of complications in peripheral vascular diseases; in minimizing the edema in the arm of post irradiation complications of radical mastectomies; and in the readjustment of the mentally disturbed patient. Physical medicine is useful in many other conditions.

However, to obtain consistently successful results, physical treatment must be prescribed and administered as carefully as a drug or other medical or surgical procedures, because it is obvious that physical measures that are powerful enough to do good are just as likely to do harm if incorrectly given or abused. Best interests of the patient cannot be served properly with a prescription for, "heat, massage and exercise." Obviously no physician would consider it right or proper to send a patient to a pharmacist with a prescription for, "a medicine to relieve pain." Therefore, to achieve best results from physical treatment the physician must prescribe it accurately for each individual patient, giving detailed instructions in his prescription. Prescribing treatment, which is medical practice, should not be the burden of the physical therapist, who like the pharmacist, is highly skilled only in technical matters in the sphere of his competency, but is untrained in diagnosis. In addition, in most instances, he does not know the whole therapeutic program which is being considered for the given patient.

The prescribing physician first should consider if the chosen modality is indicated for the correctly diagnosed condition. Then he should consider what are the actions and reactions of this modality and how it is best applied. Typically, physical agents have a primary reaction occurring within one hour after their application and a secondary reaction which, at times may be more severe, taking place several hours later. For example: secondary reaction to ultraviolet occurs 6 to 10 hours later; secondary hyperemia following moist heat occurs 8 hours after application. The physician should state the dosage as accurately as possible. He should know the side effects and what precautions should be observed and what contraindications are present for its use. For example: a diabetic patient on insulin whose disability requires resistance exercise must be watched for signs of insulin reaction. Here the exercise periods may have to be shortened to prevent this complication. Often times in multiple disabilities the correction of a certain one may be possible only at one time. This should be indicated as well as the bodily segment to be treated if more than one are involved. Shortening the time of application of physical agents may prevent excessive reactions. The physical modality used should be the one which will accomplish best results. The results of treatment should be evaluated at regular intervals and the application of the modality should be adjusted or changed as the condition progresses or regresses to meet the needs of the patient in the same way as it is done with drugs.

All physical modalities are described as to their average effect, and individual modifications are necessary. It is the physician who must decide what physiologic effects he desires to obtain. For example, let us consider the effects of heat which may be

applied locally or generally. Irrespective of any other claims, the prime physiologic response of heat is the production of hyperemia, which depends on the duration of application and surface area of exposure. The limiting factor of the effectiveness of different thermal agents is in the depth of penetration and the degree of absorption of the energy impressed on the body tissues. Some forms of heat will elevate the temperature only in the superficial tissues, some will heat both the superficial and deeper layers, while other forms are able to penetrate to the deep structures. In addition to hyperemia, heat has the ability:

(1) To reduce or relieve pain and discomfort by mild doses.

(2) To lessen hypertonicity and produce sedation, thus decreasing spasticity, tenderness and so-called spasms.

(3) To release tightness and shortening in muscles, ligaments, fascial planes and other related structures. The mechanism by which this is accomplished is not well understood, though clinically, the application of heat results in greater mobility of involved segments or areas, especially after judicious stretching. This lessens the incident of permanent muscular shortening, fibrosis and eventually contractures.

(4) To increase interstitial transudate. This is incident to high capillary pressure produced by the increased circulation which is most pronounced on the arterial side.

(5) To cause over-ventilation, if used excessively over a too long period or too large area, especially in patients with lowered vital capacity, due to involvement of respiratory apparatus.

(6) To alter circulation and blood pressure. This is a variable occurrence, though it may have a profound influence on the cardiovascular system, since it may produce a reduction in volume of blood due to loss of fluid from excessive sweating and increase the alkalinity.

These are the more important and more obvious effects of the application of heat. Of these, the first three are the most desired and heat is used primarily for this purpose. The last three effects are undesired and appropriate steps should be taken to prevent or minimize their influence. This may be accomplished by selecting the proper thermal agent most suitable for the patient's complaint, age and physical condition, or by modifying the environment or building up the patient when possible. Some complications can be avoided by adequate aftercare and it is always advisable, if the condition of the patient permits, to follow the application of heat by some other treatment such as, massage or exercise, which has a tendency to displace or reduce swelling due to increased transudate. This is particularly important in the totally paralyzed extremity which does not have enough muscle tone to maintain normal lymph flow. This increased transudate has also a tendency to cause further embarrassment to the already poor systemic circulation, thus precipitating circulatory decompensation. The preventive procedures should immediately follow the application of heat or at least these should be carried out within one hour. This not only prevents complications but facilitates the accomplishment of these procedures, because of the increased relaxation and increased circulation.

Similarly other physical agents, as ultrasound and electricity, have desirable as well as undesirable effects which must be considered carefully before prescribing them. There are other pitfalls which should be avoided, in the prescribing of physical treatment. One of the most common is the unnecessary delay in starting treatment. Too often it is believed that stiffness of a joint, or muscular pain will, "work itself out." This often results in severe tightness or contractures, which will require prolonged treatment to correct, if it can be done at all. Some may remain permanently. Another pitfall is inadequate instruction for exercise to the patient. Most patients need to practice under supervision until they become proficient in the proper movement pattern. Otherwise exercises may not help but may aggravate the condition by increasing imbalance between the strong and weak muscles. Recent advances in neurophysiology have provided more specific exercise therapy which depends on the site of lesion in the total neural transmission pattern of the stimulus. A peripheral nerve lesion will cause involvement of the muscles that it supplies, but involvement of the central nervous system will cause paralysis of movement patterns and not of individual muscles. It is obvious that although both conditions require exercises, the types for each will be different.

Some other pitfalls are:—inadequate

amount of treatment, inadequate follow-up by the physician, and "shot-gun" type of prescription. The treatment should not be prolonged past the point where the patient has received maximal benefits.

Closely related to physical medicine is rehabilitation. Rehabilitation has been frequently called the third phase of medicine. It is an active phase in which the aim is to provide most effective therapeutic measures for as rapid and complete restoration of function as possible. This phase must not be confused with convalescence in which the patient is left alone to rest through the period during which nature and time take their course. Rehabilitation is a dynamic concept which emphasizes the residual abilities retained by the patient, rather than his disabilities. Comprehensive rehabilitation utilizes the knowledge and practices of medical, psychologic and other available biologic and social sciences to provide a total care of the patient and not of the disease entity. This patient-oriented approach is perhaps the most significant feature of comprehensive rehabilitation. The efficient application of such a program necessitates a penetrating understanding of who the patient is and what are his personality characteristics, what is his emotional stability, his physical capacity and motivational drive as well as the degree of his handicap and his potentials. It is obvious that any given disturbance in the individual will evoke reactions in many areas of the patient. These disturbed or affected areas, be they physical, mental, social or vocational, which form the indivisible person, must be considered, evaluated and treated to obtain the optimal recovery.

It becomes apparent then that for the best management of these people, comprehensive rehabilitation will require the utilization of a great many skills of diverse disciplines, and therefore it must be a team operation. In such an approach, however, there are certain inherent dangers which, if not guarded against, may increase the severity of the disability and handicap through division of authority and opinion. Therefore, it is absolutely necessary that the physician remain the pivot point around which the program is developed because it is only the physician, who with his medical knowledge, can evaluate the total potentials and limitations of the whole patient. Moreover the team can never assume the final responsibility for the care of the patient. This is the sole responsibility of the individual physician.

The initial stages of rehabilitation necessarily take place on the wards and in the clinics, for it cannot be emphasized too often that rehabilitation is an integral part of medical and surgical treatment and should commence as early as possible after the onset of illness or injury. The best results are obtained in cases which have followed an appropriate physical medicine treatment program from the first day on which it can be safely prescribed. However, the provision of an adequate physical medicine and rehabilitation program is not a matter which can be safely left to the haphazard device of any nurse, therapist or technician, who happens to administer some functional and self-care activities or exercises. It is essentially a scientific form of treatment which is constantly changing and improving its technics and can be only entrusted to a physician thoroughly conversant with modern methods.

The rehabilitation program must be carefully prescribed individually for each patient who has residuals of medical or surgical disability and for each successive grade in the process of recovery. It must be well balanced, progressive and increasing in content and strenuousness as the patient begins to recover both physically or mentally. It must be meaningful. It is only by sympathetic understanding of patient's problems that his confidence can be gained and his cooperation in his own recovery process secured; both are essential for successful results.

From the Executive Director

MEDICAL DIGEST

News of Interest to Doctors in Tennessee

Physicians' Image Ranks Second in National Survey

● The National Opinion Research Center at the University of Chicago has announced results of a survey taken in 1963 showing the public's opinion of physicians ranked second only to U. S. Supreme Court Justices. This is the same rank held by physicians in 1946 when the Research Center conducted its first opinion survey. The Center cites earlier studies by other groups to show that there has been no substantial change since 1925.

Public Regard At High Level

● The importance of the surveys is the promise that this public regard holds for the continuance of the doctor-patient relationship which is so necessary to the practice of quality medicine. The 1947 and 1963 surveys were made at times when the public was under pressure to accept systems of nationalized medicine and, consequently, when American physicians were forced to engage in controversy to preserve the vital relationship between doctor and patient. Undoubtedly the public understands that physicians have stepped into politics only to keep politicans from stepping into medicine.

Scientific Occupations On Up-Grade

● Respondants to the coast-to-coast study in 1963 viewed scientific occupations in a much more favorable light than in 1947. Tied for third place in the listing of most desirable occupations in 1963 were "nuclear physicist"—ranked eighteenth in 1947—and "scientist" which ranked seventh in 1947.

The increased statue of scientists was accompanied by a decline in public opinion of most political occupations. "State Governor" dropped from a tie for second to a tie for fifth; "cabinet member" fell from fourth to eighth; "diplomat" dropped from a tie from fourth to tenth; and "mayor of a large city" went from sixth place to seventeenth place. The only political occupation to retain its 1947 rank was "Representative in Congress" ranked eighth in both polls.

Top Ranking Occupations

● The top ten occupations in order of ranking in the 1963 survey were: Supreme Court Justice; physician; scientist or nuclear physicist (tie); cabinet member; Representative in Congress or college professor (tie); and diplomat, chemist or lawyer (tie).

Sixteen years earlier, the top ten were Supreme Court Justice; physician or state governor; cabinet member or diplomat; mayor of a large city; scientist; representative in Congress or college professor; government scientist or banker.

Physicians' Telephone Directory Listings

● Recently, the Tennessee Medical Association forwarded a letter from the Licensing Board for the Healing Arts to all County Medical Society Officers attempting to clarify physicians' listings in both the white and yellow sections of telephone directories. The controversy arises over the word "Clinic." The word "Clinic' cannot be used in connection with a licensee's name. No information should follow the doctor's name other than that authorized by the statute. The Attorney General of Tennessee has rendered the following opinion:

". . . the name of such person immediately followed by the recognized abbreviation indicating the professional degree, if any, held by such person, and containing immediately below the person's name, in equal size lettering, the word or words 'Medicine', 'Surgery', or 'Medicine and Surgery', for practitioners of medicine and surgery; 'Dentist' for practitioners of dentistry; 'Osteopath' or 'Osteopathic Physician' for practitioners of osteopathy; 'Chiropractor' for practitioners of chiropractic; 'Optometrist' for practitioners of optometry; provided, further, that the same wording shall be used in all signs, announcements, prescription pads, and stationery of such registrant."

New Publication Offers Management Aids to Physicians

● Business Management of a Medical Practice is a practical, concise book (190 pages) which every practicing physician will find a helpful addition to his office. The author of the book (published by C. V. Mosby, St. Louis, Mo., $7.75) is the director of the American Medical Association's Law Department. The experience of the author has given him an understanding of the information the doctor will find most useful most often.

Ways and Means Committee Turns Down King-Anderson Bill (HR-3920)

● By a voice vote, the House Ways and Means Committee turned down the King-Anderson health care plan for the aged under Social Security. Rep. Cecil R. King (D. Calif.), co-author of the bill, said he now hopes the Senate will amend any Social Security bill the House may pass to include a health care plan. Rep. King removed the health care provisions from further consideration by the committee. He felt the Administration did not have sufficient votes to get the measure through and acted to avoid a certain vote against the bill. Although attempts will be made to pass the King-Anderson bill in the Senate, any Senate passed measure will have to be referred back to the House Ways and Means Committee where it would face rough going in this session of the Congress.

Medical 'Associations' For Tax Purposes Hampered

● Recent IRS rulings darken all hopes of physicians associated in professional associations to gain equitable tax treatment on retirement contributions under so-called Kintner-type plans. If adopted, these regulations would hold that a medical group, now legal under Tennessee Law since a modification of the Uniform Partnership Act, may not qualify as an "Association" for federal tax purposes because it is created to engage in a specific type of business or profession. Several state medical associations have lodged protests with the Commissioner of the Internal Revenue Service.

House Bill 9217 which would force IRS to allow Medical Association groups for tax purposes is now before the House Ways and Means Committee.

Tennesseans Reach High Level in Insurance Protection

● The people of Tennessee have reached a high level in insurance protection. As of December 31, 1962, seventy-one percent of the state's population were covered by some form of health insurance for the costs of hospital and medical care. This compares with the national figure of 76% of the civilian population—some 141 million persons—having health insurance. Tennessee data is as follows:

Number of persons with hospital expense ins.....2,566,000
Number of persons with surgical expense ins.....2,332,000
Number of persons with regular med. expense ins.1,595,000
Number of persons with major medical ins..... 643,000
Total Health Insurance Benefits paid (1961)...$95,782,000

There are now 292 health insuring organizations licensed in Tennessee (288 insurance companies, 2 Blue Shield and similar groups, and 2 other plans).

Public Service

THE TENNESSEE TEN

Hadley Williams, Public Service Director

Committee Bypasses King-Anderson

● The House Ways and Means Committee agreed to shelve the King-Anderson Bill recently when one of the co-sponsors of the Bill, Rep. Cecil R. King, D-Calif., moved that all present discussion be confined to social security retirement.

Rep. King was quoted as saying "we knew we didn't have the votes, so there was no point in pushing it." King promptly added that he had hopes the Senate would write in health care provisions.

The Committee agreed on an across-the-board increase of 5 per cent for the nearly 20 million beneficiaries of social security. Compulsory inclusion of physicians, as well as firemen and policemen, was also voted. Other amendments approved would provide for the inclusion of tips of cab drivers, waiters and others in the taxable wage base; children's benefits to continue for dependent children who are full-time students up to their 22nd birthday (presently benefits stop at 18); and would make widows eligible to receive reduced benefits at age 60 (presently age 62).

The increased benefits, expected to cost $1 billion, will be financed in the following way. Beginning in January, 1965 the wage base on which social security taxes would be paid by employer-employee would be increased from the present $4,800 to $5,400 and the tax rate would be modified as follows: in 1965, it would remain at the present 3⅝ per cent; 1966, raised to 4 per cent; 1967-69, it would be increased to 4.5 per cent; and in 1970 and thereafter, increased to 4.8 per cent.

The Bill is expected to come up for vote on the House floor around July 20, after the Republican Convention.

Rehabilitation Gains Sited

● The Vocational Rehabilitation Division of the Tennessee Department of Education reports a record number, 2,689, disabled people were rehabilitated into employment last year.

The combined earnings for the year after rehabilitation for these 2,689 people will amount to $5,023,876 as compared to the $690,328 earned during the year previous.

Physicians were the largest group to refer patients to seek the services of Vocational Rehabilitation. Medical services provided the 2,689 people included expenditures of $67,684 for diagnostic procedures, $172,171 for surgery and treatment and $238,964 for hospitalization.

Health Insurance Covers 145 Million

● The Health Insurance Institute reports that at the end of 1963 more than 145 million Americans or 77 per cent of the civilian population, had some form of health insurance. Coverage increased by 3.9 million people during 1963.

Benefit payments by all health insuring organizations to help cover the cost of hospital, surgical and medical care amounted in 1963 to nearly $6.9 billion, up $694 million over 1962.

Also reported by the Institute was the fact that 1963 was America's worst year for accidents. Some 51.8 million people were injured last year, nearly three-fourths of them either in the home, at work, or in accidents in which motor

vehicles were involved in some way. Daily, the average number of persons injured came to almost 142,000. 101,000 persons died from accidents in 1963.

Tobacco Research Grants Announced

● The American Medical Association Education and Research Foundation for ten approved first-year projects totaling $340,000 have been approved. These were the first awarded under the long-range research program on tobacco and health authorized by the AMA House of Delegates last December.

Approved projects include studies of the action of nicotine on cells, to produce synthetic radioactive nicotine for research, to find more facts on the relationship between cigarette smoking and cardio-pulmonary disease, to study the effects of nicotine on the human heart, to determine how cigarette smoke affects the ability of the lungs to clear foreign particles, to measure the addictive qualities of nicotine, to study the effects of nicotine on heart muscle cells, and to study nicotine as a stimulant or tranquilizer.

Raymond M. McKeown, M.D., Foundation president, said "no one can predict the ultimate results of this research, but we are hopeful that the hazards of smoking can be substantially minimized for the protection of the 72,000,000 people in this country who smoke cigarettes. It is also possible that there may be some by-products of immense value resulting from tobacco research."

The AMA Foundation's tobacco and health research program is financed primarily from a $10,000,000 five-year unrestricted grant from the six major tobacco companies.

Pfizer Sues Drug Store

● The Chas. Pfizer Company filed suit June 26 against a Philadelphia, Pa. pharmacy for substituting on prescriptions for Tetracyn (Pfizer's brand name for tetracycline), generic tetracycline capsules not made by Pfizer and obtained from sources unlicensed by Pfizer.

The company said this activity constitutes infringements of its tetracycline patent and of its trademark "Tetracyn". A spokesman for Pfizer said, "We know from our long association with, and our high regard for, our friends in pharmacy that the members of this profession are unalterably opposed to substitution as a cardinal violation of the ethics of the profession. Accordingly, when our attention is directed to an instance of substitution under circumstances that afford us a legal basis for action, we feel a sense of obligation to pursue our legal remedies with full confidence that our action will be endorsed by pharmacists throughout the country."

State Death Rate Declines

● According to the latest quarterly vital statistics report from the Tennessee Department of Public Health, the death rate for the first quarter of 1964 was 9.7 per 1,000 population. This compares with the rate of 11.2 for the same period in 1963 which was the highest rate for any comparable period in some 26 years.

Heart disease remains the biggest killer in the state claiming 3,122 lives. The next six leading causes of deaths for the first quarter of 1964 were circulatory diseases, cancer, accidents, influenza and pneumonia, diseases of early infancy and general arteriosclerosis.

1964—A Year Of Decision

● Failing to cast your vote is unexcusable. The primary election in Tennessee will be held on August 6. The general election is November 3.

Know the candidates. Know the issues. Support the political party of your choice. Vote because it is the one way you can have a voice in your government. It is a duty no free man can shirk if he wants to remain free.

The authors review this curious disease of unknown etiology.

Infantile Cortical Hyperostosis*

CHARLES W. REAVIS, M.D., and HARVEY GRIME, M.D., Chattanooga, Tenn.

Since infantile cortical hyperostosis was first recognized as a new syndrome in 1930 by Roske,[1] more than 50 cases had been reported by 1952 and many more patients had been observed.[2] This condition of infants is frequently referred to as "Caffey's Disease," because the first full description of the entity was by Caffey and Silverman in 1945.[3] Infantile cortical hyperostosis does not seem to be confined to any one sex, race, or nationality. Of the 27 cases reported by 1950, 15 were in males and 12 in females. This disease has been reported in infants from eleven states of the Union, Canada, Holland and Germany. One case has been reported from China in a native of Shanghai.[1]

Clinical Manifestations. Infantile cortical hyperostosis is usually benign and the clinical findings last only for a few weeks.[1] The principal features of the disorder are onset during the early part of the first year of life (it has been said that no valid case has had its onset after the 5th month of life),[4] tender swellings in one or more of the following sites: face, jaws, scapula region,[3] ribs and long bones of the extremities, including the metatarsals.[5] These changes have been seen in all of the tubular bones of the skeleton except the phalanges and vertebral bodies. Flat bones which may be involved also, include the ilia, parietal and frontal bones.[4] The mandible and clavicles are the structures most frequently affected. These changes are not associated with adenopathy and the areas of swelling are not fluctuant. Hyperirritability, swellings of the soft tissues, and cortical thickening of the underlying bones are the characteristic manifestations common to all patients, though tenderness, pseudoparalysis, dysphagia, and pleurisy have all been observed.

Laboratory findings which may be associated are anemia, increased white cell count, increased sedimentation rate, elevated temperature[6] and elevated serum phosphatase.[7] The most constant positive laboratory findings have been increased sedimentation rate and increased phosphatase.[4] All patients tested have had negative serologic tests for syphilis and negative tuberculin.

Course of the Disease. Infantile cortical hyperostosis usually has a good prognosis. The chronic type with late crippling residuals is very infrequently observed,[2] there having been only 6 of such cases reported in the literature—5 of the 6 have bony bridges between the radius and ulna and one with bony bridges between the ribs. From the sparsity of reported cases it might be concluded that this is a rare complication.[8] The disease is characterized by many exacerbations and remissions; the lesions may progress in one part of the body while regressing in another.[1,4]

Radiologic Findings. Early changes are external thickening of the cortical walls with a normal sized medullary cavity.[2] (Figs. 1 and 2.) The radiographic bone changes usually disappear in a few months.[1] (Fig. 3.) They may, however, be followed by the late changes of progressive thinning of the thickened cortical walls, from the inside, and reciprocal dilatation of the medullary cavity. The nature of the soft tissues which fill the expanded marrow cavity is unknown.[2] Ventral bowing of the tibias has been an early and late feature of several reported cases. This is due to disproportionate thick hyperostosis on the ventral wall early, and when healing begins the thick hyperostosis is reamed out from the inside and there is therefore failure of reshaping of the external contour of the shaft.[9]

Etiology. The etiology has thus far remained obscure; the casual agent has not

*From the Department of Radiology, the Baroness Erlanger Hospital and the T. C. Thompson Children's Hospital, Chattanooga, Tenn.

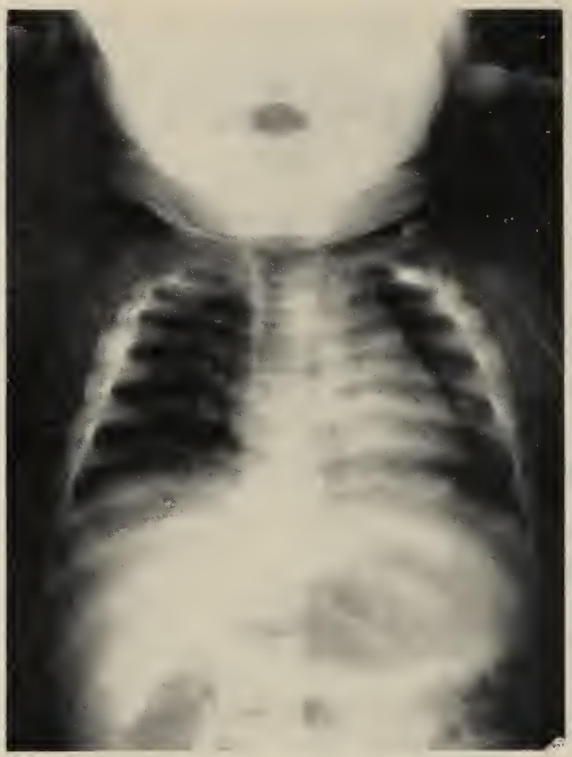


FIG. 1. A 3 mo. old, colored male was seen in clinic for first time with a chief complaint of swelling of the jaw for 2 wks., more marked on the right. T. was 100.3°, Hgb. 8.6 Gm., VDRL—negative. X-rays reveal cortical hyperostosis of the ribs to be prominent as well as in the mandible.



FIG. 3. Same patient as in figure 2. On Nov. 9, 1962, there is marked regression of the cortical hyperostosis of the right mandible, only slightly over 3 months after the first film.

been determined.[3] Caffey discusses the entity under skeletal infections because many patients have an elevated temperature, and most have an increased sedimentation rate. A feature suggesting infection as an origin is pleural exudate in association with costal hyperostosis.[4] However, there are 3 exam-





FIG. 2. A 5 mo. old colored girl was admitted to Children's Hospital because of swelling of the right side of face for approximately 2 wks. duration, and after having been treated for parotitis on an outpatient basis without response. Physical examination upon admission revealed only swelling of right side of the face with tenderness located in the right mandible. X-ray of July 31, 1962, demonstrated cortical hyperostosis of the right mandible. Hgb. was 11.2 Gm.; PCV—39%; WBC. 6,900; sickle-cell prep—negative; urea nitrogen, 5 mg%; sedimentation rate—30 mm. in 1 hour; VDRL was nonreactive; blood culture revealed no growth in 48 hours; throat culture showed normal flora; alkaline phosphatase was 19.2 B units (normal at this institution is 2 to 9 B units); urinalysis was essentially negative; histoplasmin skin test and intermediate strength PPD were neg. Patient was given prednisone 5 mg. orally, 3 times daily and improved remarkably to be discharged on the 12th hospital day to be followed in the Out Patient Clinic.

ples of infantile cortical hyperostosis preceding birth by several weeks.[2] There has been no evidence of disease in the parents. Biopsies of affected bones have revealed only hyperplasia of the lamellar cortical bone. Soft tissue biopsies have not been reported. There has been no evidence of inflammation or subperiosteal hemorrhage. Inasmuch as the cause remains undetermined at the present, the possibility of a viral infection should be considered in patients suspected of this condition,[3] though virus studies so far have been negative. It is clear that infantile cortical hyperostosis is probably not related to rickets, scurvy, syphilis, tuberculosis, pyogenic infection, allergy, or trauma. No patient with infantile cortical hyperostosis had been reported to have any symptoms of hypervitaminosis A and none have had a history of abnormal intake of this vitamin.[1]

It is possible that the disease is not primary in the skeleton. Most patients have systemic symptoms and soft tissue inflammation long before bony changes are evident. The initial disturbance might be in the muscles and vessels since biopsies of muscle have been reported as showing evidence of degeneration and changes in vessels.[1] These changes could stimulate the periosteum and cortex to hyperostosis. Such a theory would be helpful to explain the lack of periosteal inflammation or hemorrhage.

Treatment. Recommended treatment consists of 100 mg. of cortisone daily for about 10 days or 2 weeks. It is suggested that the dose then be tapered off to prevent rebound reactions, which may be severe when steroids are suddenly stopped.[2]

Summary and Conclusion

The most constant manifestations of infantile cortical hyperostosis are hyperirritability, swelling of the soft tissue, and cortical thickening of the underlying bone. The most constant laboratory findings are increased sedimentation rate and increased phosphatase activity of the blood serum. The etiology as of the present is unknown.

References

1. Sherman, M. S. and Hellyer, D. T.: Infantile Cortical Hyperostosis; Review of literature and report of five cases, Am. J. Roentgenol. 63:212, 1950.

2. Caffey, J.: Late Skeletal Changes in Chronic Infantile Cortical Hyperostosis, Radiology 59:651, 1952.

3. Caffey, J. and Silverman, W. A.: Infantile Cortical Hyperostosis; Preliminary Report on a New Syndrome, Am. J. Roentgenol. 54:1, 1945.

4. Caffey, J.: Pediatric X-Ray Diagnosis. Year Book Publishers, Inc., Chicago, 1961, (4th Edition) pp. 1014.

5. Nelson, W. E.: Textbook of Pediatrics. W. B. Saunders Company, Philadelphia, 1957, (6th Edition) pp. 1343.

6. Gibson, A. C. and Clark, B. P.: Infantile Cortical Hyperostosis, Pediatrics 1:221, 1948.

7. Mattherson, W. J. and Markham, M.: Infantile Cortical Hyperostosis, Brit. M. J. 1:742, 1952.

8. Scott, E. P.: Infantile Cortical Hyperostosis—(Report of an unusual complication), J. Pediatrics 62:782, 1963.

9. Kitchin, I. D.: An Atypical Case of Infantile Cortical Hyperostosis, J. Bone & Joint Surg. 33B: 248, 1951.

The author believes that choledochojejunostomy is the preferable procedure if a by-pass procedure is to be done. The gallbladder should be removed with this operation.

Cholecysto-Jejunostomy — A Poor Procedure*

W. EDWARD FRENCH, M.D., Memphis, Tenn.

Cholecystojejunostomy has been such an accepted procedure for permanent obstruction of the common duct that one hesitates to question the value of this procedure, particularly in cases of obstruction due to carcinoma of the head of the pancreas.

It has become accepted that gallstones will frequently form when any procedure is done which destroys the function of the sphincter of the lower end of the common duct.[1-4] Doubilet and Mulholland[2] were some of the first to report that the gallbladder should be removed even if it is normal, if a thorough sphincterotomy is done. This work was later corroborated by Jones and Smith[5] when they reported that 3 of 5 patients, who had normal gallbladders at the time of the sphincterotomy, developed nonfunctioning gallbladders subsequently. Large[1] reported to the American Surgical Association that ascending infection in the biliary tract does occur when the sphincter of Oddi is severed or obstruction of the common duct is overcome by a by-pass procedure. In 5 patients in whom a sphincterotomy or a common duct was anastomosed to the intestinal tract, the normal gallbladder being intact, all subsequently developed gallstones. In one patient a Roux-Y anastomosis between the gallbladder and jejunum was done for a carcinoma of the head of the pancreas. At autopsy several months later, stones were found in the gallbladder.[1]

Cholecysto-intestinal fistulas, either spontaneous or surgically created, usually intensify biliary dysfunction by producing cholangitis, hepatitis, and jaundice.[4,6-13] However, surgeons are more likely to do the procedure of lesser magnitude, a cholecystojejunostomy, rather than a choledochojejunostomy with removal of the gallbladder, particularly in patients who are deeply jaundiced due to a blocked common duct.

A patient seen with symptoms of cholangitis, cholecystitis, and jaundice, and in whom a cholecystojejunostomy had been done ten years previously, prompted many questions. The hospital records of 7 patients upon whom a cholecystojejunostomy or choledochojejunostomy were done for benign disease blocking the lower end of the common duct are reviewed. (Table 1.) Why does one so frequently see cholangitis and cholecystitis when the gallbladder is anastomosed to the intestinal tract? Is it because bacteria and food particles ascend to the gallbladder to cause infection, and can this be overcome by doing an entero-enterostomy to prevent food particles from entering the gallbladder? The patient in question had had an entero-enterostomy done. Can we adequately drain the biliary system by creating a cholecysto-intestinal fistula? The following case report, as well as a resume of several patients (Table 1), and laboratory studies lend evidence to answer these questions in support of the belief that a cholecystojejunostomy will not adequately drain the biliary system.

Case Report

A 73 year old white woman was seen on Nov. 6, 1958, with symptoms of cholangitis, cholecystitis, and jaundice. She had had varying degrees of these symptoms for well over 10 years. Ten years ago, when the patient had jaundice, a cholecystojejunostomy and entero-enterostomy were done for what was thought to be a nonresectable tumor of the head of the pancreas. Later she was told the diagnosis was pancreatitis and not a tumor and that the subsequent symptoms were due to pancreatitis.

Preoperative gastrointestinal x-ray studies at the present admission revealed a large fistulous tract between the gallbladder and the intestinal tract. Realizing that the patient's symptoms were not corrected permanently by a cholecystojejunos-

*From the Department of Surgery of the Baptist Memorial Hospital and the University of Tennessee School of Medicine, Memphis, Tenn.

Table 1

Results of Surgically Performed Biliary-Intestinal Fistulae for Benign Disease

Patient	Race Sex	Age	Resume of Symptoms	Diagnosis
1)	W.F.	47	Jaundice cleared; one year later all biliary disease symptoms except jaundice returned.	No biopsy. Thought later to be pancreatitis.
2)	W.F.	40	Symptoms and jaundice disappeared. Fourteen years later free of symptoms.	Thought to have pancreatitis. Gallbladder had been previously removed. Duct was anastomosed to jejunum.
3)	W.M.	60	Jaundice cleared and symptoms absent for 6 months then returned. Symptoms of biliary disease now worse.	No biopsy. Now thought to have had pancreatitis.
4)	W.M.	72	Jaundice cleared. Four months later it returned with biliary and G.I. symptoms much worse.	Now thought to have pancreatitis.
5)	W.F.	50	Jaundice cleared. Returned in 6 months with return of mild jaundice and biliary symptoms much worse. Two years later seen again with same symptoms.	Cholecysto-enterostomy done for possible injury to common duct during surgical procedure.
6)	W.M.	63	Well for 6 months, then return of all symptoms.	Thought to have pancreatitis.
7)	W.F.		Continued to have symptoms of pancreatitis for 9 years after operation. Then had gastric resection 3 years later, developed marginal ulcer. Still has symptoms.	Pancreatitis

tomy and entero-enterostomy, and that she certainly did not have an obstruction due to a malignant disease, and that she had jaundice in spite of a large fistula between the gallbladder and the intestinal tract, laparotomy was advised.

At operation a large gallstone was found impacted in the lower end of an enormously dilated and markedly inflamed common duct. The inflammatory reaction and dilatation extended throughout the extrahepatic biliary system. The common duct and gallbladder contained numerous stones, most of which were much smaller than the anastomotic stoma. The entero-enterostomy had closed.

The stones were removed from the common duct and the lower end of the common duct was opened by doing a transduodenal sphincterotomy. The cholecystojejunostomy was corrected and the gallbladder was removed. Now, some 5 years later, this patient enjoys good health and there has been no return of her symptoms.

Comment. Why was there such a marked degree of dilatation of the biliary duct system if the anastomosis between the gallbladder and jejunum were still patent, and why were there so many gallstones and stones in the common duct if the anastomosis was so large? One can but surmise that "the biliary system cannot be adequately drained by means of the gallbladder."

Experimental Studies

In an attempt to reproduce these findings in the laboratory and to further prove this concept, several dogs were subjected to various types of surgically produced biliary fistulae. The following is a list of the procedures done and the number of dogs used for each procedure:

Procedure	Number of dogs
Cholecystojejunostomy	2
Cholecystojejunostomy and ligation of common duct	6
Roux-en-Y cholecystojejunostomy and ligation of common duct	6

Results. As is true in many other short-circuiting procedures, the anastomosis between the gallbladder and jejunum will close if there is no obstruction to the lower end of the common duct. In the 2 dogs treated in this fashion the anastomosis closed, and these animals had no evidence of cholangitis when sacrificed three and four months later.

Only in dogs in which the common duct was ligated did the anastomosis between the gallbladder and jejunum remain patent. In each dog with a patent gallbladder-jejunal anastomosis there were varying degrees of infection. This was true regardless of the size of the anastomosis and regardless of the length of time which had elapsed since operation. The degree of infection seemed to be much greater in dogs that had a loop jejunal-gallbladder anastomosis than in the dogs with a Roux-en-Y anastomosis.

Of the 12 dogs in which the common duct was ligated and some type of gallbladder-jejunal anastomosis was done, 8 developed gallstones. Small stones were present in the gallbladders and common ducts in spite of a wide anastomosis between the gallbladder and jejunum. This lends emphasis to the theory that stasis of bile with cholangitis and cholecystitis is a precursor to stone formation, as borne out from this small series of experiment. All of these dogs had severe cholangitis. It was interesting to note that the degree of infection was greater in the loop jejunal-gallbladder anastomosis and that the incidence of stones was also greater with this type of anastomosis. The following reveals the number of dogs that developed concretions or stones and the type of procedure done:

Procedure	*Number of dogs*	*Number with stones*
Loop anastomosis	6	5
Roux-en-Y	6	3

An increase in intraluminal pressure, regardless of cause, will lead to dilatation of a duct and this is true of the common duct. When the common duct is blocked whether partially or completely, it will dilate. If, on the other hand, the intraluminal pressure can be reduced by means of some short-circuiting procedure, the duct should not dilate. A short-circuiting procedure for a blocked common duct, as is indicated in certain patients with obstruction due to carcinoma, would be an anastomosis between the gallbladder and jejunum. Therefore, if a ligature is placed around the common duct or if a stone should pass from the gallbladder to the common duct and block it, one may assume that dilatation of the common duct could be prevented by anastomosing the gallbladder to the jejunum. To the contrary, however, in every dog where the common duct was ligated and an anastomosis was done, the common duct was enormously dilated. Why did the common duct dilate if the duct system could be decompressed adequately by means of the gallbladder?

Another most interesting observation in this small series of experimental animals was the recanalization of several common ducts. The ligature used in ligating the lower end of the common duct was similar to all. In one of the dogs in which a loop cholecystojejunostomy had been done, recanalization was found when the animal was sacrificed. In 3 of the animals in which a Roux-en-Y anastomosis had been done, recanalization also took place.

Conclusion

On the basis of the findings in a clinical case, as well as from several records of hospital patients, and from a small series of experiments done on animals, one may assume that the biliary system cannot be adequately drained by means of the gallbladder. One also might surmise that choledochojejunostomy may be a better procedure, even in cancer of the head of the pancreas, than a cholecystojejunostomy. However, if a choledochojejunostomy is done, no matter what the reason, the gallbladder should be removed.

References

1. Large, A. M.: Regurgitation Cholecystitis and Cholelithiasis, Ann. Surg. 146:607, 1957.

2. Doubilet, H. and Mulholland, J. H.: The Surgical Treatment of Recurrent Acute Pancreatitis by Endocholedochol Sphincterotomy, Surg. Gynec. & Obst. 86:295, 1948.

3. Zollinger, R.: Personal Communication.

4. Coffey, Robert J.: Personal Communication.

5. Jones, S. A. and Smith, L. L.: Transduodenal Sphincteroplasty for Recurrent Pancreatitis, Ann. Surg. 136:937, 1952.

6. Hicken, N. F. and Coray, O. B.: Spontaneous Gastro-intestinal Biliary Fistula, Surg. Gynec. & Obst. 82:726, 1946.

7. Noskin, E. A., Strauss, A. A. and Strauss, S. F.: Spontaneous Biliary Fistula, Ann. Surg. 130:270, 1949.

8. Carlson, E., Gates, C. Y. and Novacovich, G.: Spontaneous Fistula Between Gall Bladder and Gastro-intestinal Tract, Surg. Gynec. & Obst. 101: 32, 1955.

9. Martin, J. D.: Choledochoduodenal Fistula: Report of a Case Complicating Duodenal Ulcer, Ann. Surg. 18:908, 1952.

10. Tate, R. C. and Shaw, H.: Choledochoduodenal Fistula, Ann. Surg. 18:908, 1952.

11. Cole, Warren H.: Personal Communication.

12. Glenn, Frank: Personal Communication.

13. Walters, Waltman: Personal Communication.

14. Holden, W. D.: Personal Communication.

Peptic Ulcer — Surgical Management, Complications, and Mortality*

JOHN RIDDLER, M.D., Jackson, Tenn.

Surgical treatment of peptic ulcer continues to be a significant and widely discussed subject. Through the years many procedures have been advocated, only to be discarded later. Fifty years ago gastroenterostomy was considered to be effective, but because marginal ulcers developed in many patients subsequently this operation has been virtually abandoned. More recently postoperative reduction of gastric acidity was found to be necessary, accomplished by partial gastrectomy. Section of the vagus nerves, to diminish further the production of acid, has proved to be a valuable adjunct to surgical treatment of peptic ulcer. At present, excision of the ulcer or partial gastrectomy is the procedure of choice for gastric ulcers. For duodenal ulcers vagotomy combined with partial gastrectomy or pyloroplasty seems to be more popular than extensive resections without vagotomy.

This report concerns 186 patients with peptic ulcer who were operated on in The Jackson-Madison County General Hospital during 1958-1963, by the surgical staff of The Jackson Clinic. Agreeing with the reported incidence, there was a predominance of white men (81%). Of the 26 patients with gastric ulcers, 6 had had previous bleeding, and of the 160 who had operations for duodenal ulcer 43 (27%) had had significant melena one or more times. (Table 1.) Twenty-two patients had had previous operative procedures—2 of these had had gastroenterostomy elsewhere but required a second operation, in one instance for a marginal ulcer and in the other for obstruction. Sixteen patients previously had had a perforated ulcer once, and 5 had had perforations two or more times.

Type of operation. Of the 26 gastric ulcers in the series, 13 were resected by Bilroth I technic, and 13 by Bilroth II. Vagotomies were performed concomitantly with two of the Bilroth I and one of the Bilroth II operations.

Table 1

TYPE OF OPERATION IN 163 PATIENTS WITH PEPTIC ULCER

Gastric ulcers			26
Bilroth I		13	
With vagotomy	2		
Bilroth II		13	
With vagotomy	1		
Duodenal ulcers			160
Bilroth I and vagotomy		14	
Bilroth II		123	
With vagotomy	90		
Without vagotomy	33		
Gastroenterostomy		8	
With vagotomy	6		
Without vagotomy	2		
Pyloroplasty with vagotomy		15	
TOTAL			186

One hundred and sixty patients were operated upon for duodenal ulcer. All 14 patients with duodenal ulcers who had Bilroth I operations had concomitant vagotomies, as did 90 of the 123 who had Bilroth II resections. Some patients in whom vagotomy was not done had 70 to 80% resections, some had operations as long as five years ago, and some had technical or anesthetic complications which prevented vagotomy. Whenever feasible, during the past four years, almost all our patients have had concomitant vagotomy.

Two elderly patients were treated for obstructive duodenal ulcers by gastroenterostomy. Six other patients had combined gastroenterostomies and vagotomies. Pyloroplasty and vagotomy were performed in 15 patients with duodenal ulcers, 2 of whom were bleeding profusely, one with an acute perforation, and 11 with chronic symptoms.

Complications. These have been divided into those that occurred while the patient was in the hospital and those requiring readmission after discharge (Table 2). Bleeding into the gastrointestinal tract, the most common complication, was serious enough in 2 instances to require laparotomy.

Six patients had delayed complications,

4 from hemorrhage and 2 from intestinal obstruction. In 3 instances the site of bleeding was not discovered despite roentgeno-

Table 2

Complications Among 163 Patients with Peptic Ulcer

Postoperative			28
Hemorrhage		7	
Varices	1		
Undiagnosed gastric ulcer	1		
Intraperitoneal	1		
Suture line	4		
Pulmonary embolism		4	
Wound infection		4	
Subphrenic abscess		3	
Intestinal obstruction requiring laparotomy		4	
Bacteremia		1	
Parotitis		1	
Wound disruption		2	
Atelectasis and pneumonia		2	
Delayed			6
Hemorrhage		4	
Source unknown	2		
Marginal ulcer	1		
Gastric ulcer	1		
Intestinal obstruction		2	
Adhesions	1		
Stomal	1		
TOTAL			34

graphic studies in all and laparotomy in one. Marginal ulcer after Bilroth II resection, which accounted for one instance of bleeding, was treated by vagotomy and resection of two-thirds of the stomach. In another patient the source of hemorrhage was an ulcer in the gastric remnant, which healed on medical therapy. Intestinal obstruction from peritoneal adhesions in one patient required lysis, and obstruction at the stoma after gastroenterostomy and vagotomy required surgical intervention in another.

Mortality. Seven deaths (4.3%) occurred in this series, 2 after operation for gastric ulcer:—one from a bleeding ulcer high on the greater curvature not detected at the first operation, and one from pancreatitis and subphrenic abscess. Causes of the 5 deaths after operation for duodenal ulcer were:—emphysema and bronchopneumonia in one patient, peritonitis in one, and pulmonary embolism in 3.

Discussion

Polya and Hofmeister anastomoses anterior and posterior to the colon following Bilroth II resections have been used with equal success. The amount of stomach removed is probably overestimated by most surgeons, and determination of the weight of the specimen does not seem to improve the accuracy. Approximately 50% of the stomach has been removed from our patients who had resection with vagotomy for duodenal ulcer during the past four years. An average of two and one-half hours was required for Bilroth II resections. A Penrose drain placed in the right subhepatic space following resections and brought out through a stab wound was considered helpful. Postoperative gastric suction through a Levin tube or gastrostomy was used routinely.

Combined pyloroplasty and vagotomy, which require less time than Bilroth resections, are being used increasingly today. The morbidity and mortality are unquestionably lower and postoperative malnutrition should be rare. We have used only the Heineke-Mikulicz pyloroplasty, but the Finney pyloroplasty may be more useful. Our experience with pyloroplasty and vagotomy is quite limited, though I believe it is the procedure of choice for the patient with an actively bleeding duodenal ulcer. It also seems likely that this procedure will become widely recognized as one of the better operations for patients with chronic duodenal ulcer. This operation could be performed in certain cases of perforated ulcer provided the operation is done soon after rupture. This would be much less hazardous for the patient than gastric resection and should reduce the incidence of definitive surgery required after simple closure of a perforation.

STAFF CONFERENCE

St. Thomas Hospital*

Ventricular Tachycardia

A 50-year-old white laborer was admitted to the medical service of St. Thomas Hospital on Jan. 6, 1964, through the Emergency Room.

He had been well until about an hour prior to admission when, while shoveling coal, there was a sudden onset of "heaviness" in the chest. A few minutes after this he developed severe, substernal and precordial chest pain which radiated to the left shoulder and left arm. This pain rapidly progressed and within a few minutes the patient fell to the ground though he remained alert. There was profuse sweating, but no nausea, vomiting, dyspnea or incontinence. He was brought to the Emergency Room by ambulance where he was found to have a B.P. of 80/60, mm. Hg., a pulse rate in excess of 200 beats per minute, and respirations of 24 per minute.

On *physical examination* he was a well developed, muscular, middle-aged man in severe distress with chest pain and severe dyspnea. Positive physical findings included a marked grayish pallor, cyanosis of the nailbeds, fingers, and ear lobes. The patient's skin was cold and he was drenched with perspiration. The lung fields were clear. Other than persistent tachycardia, examination of the heart was not remarkable, there were neither murmur nor rub. There was minimal pedal edema.

On arrival in the Emergency Room he was given 100 mg. meperidine (Demerol) intramuscularly and nasal oxygen was started immediately. An EKG. revealed ventricular tachycardia with a rate of 250 per minute. He had received no relief from oxygen and meperidine. Morphine sulphate (gr. $\frac{1}{8}$) was given intravenously. After these medications the patient vomited several times. He continued to have severe pain, nausea and dyspnea. Intravenous fluids were begun. He was given 200 mg. of procainamide Hcl. (Pronestyl) intravenously with reversion to sinus rhythm within two or three minutes. Immediately after reversion of the arrhythmia, the symptoms were relieved and his color improved greatly. He was given promethazine Hcl. (Phenergan) intramuscularly and 200 mg. quinidine sulphate. The regular pulse was of 68 per minute.

Past History. Twenty years ago, at age 30, he was told he had heart disease but no details are known. He was hospitalized in 1954 at the Nashville General Hospital following an injury, at which time his EKG. showed numerous premature ventricular contractions but otherwise was normal. He was hospitalized for 29 days at Baptist Hospital in June 1955, because of an anterior myocardial infarction, confirmed by serial electrocardiograms. Numerous premature ventricular contractions were present on all tracings. He was digitalized during this hospitalization and remained on maintenance doses of digitalis for 3 years. He was hospitalized at Nashville General Hospital in 1958 and 1959 for a renal stone complicated by infection. At that time EKG's. were within normal limits, but an enlarged heart was noted on a chest roentgenogram. He was hospitalized at St. Thomas Hospital in Jan. 1961, for congestive heart failure. During the 14 day period of hospitalization he responded to the usual methods of treatment. During this time the electrocardiograms showed a pattern of coronary insufficiency. Premature ventricular contractions were noted on nearly every record. There was no evidence of myocardial infarction. During this hospitalization a glucose tolerance test indicated diabetes mellitus. This was treated with diet and subsequently has been well controlled. Since 1961 he has been followed in the medical clinic of St. Thomas Hospital. He has been on a low sodium diabetic diet and is taking digitalis daily. Several electrocardiograms have shown digitalis effect and a persistent first degree A-v block.

The family and social history and review of systems were noncontributory.

Course. After admission to the hospital, the following laboratory data were obtained. All SGOT determinations were within normal limits. There was a leukocytosis of 12,800 on the day of admission, and a similar WBC. count on the 2nd hospital day after which it returned to normal limits. The lactic dehydrogenase was within normal limits on 6 determinations over this hospitalization. Two fasting blood sugars were 139 and 100 mg.%. A 2 hour postprandial sugar just before discharge from the hospital was 123 mg.%. On x-ray the lung fields were clear; the slight cardiac enlargement confirmed by fluoroscopy, and reflecting enlargement of the left ventricle. There was no evidence of aneurysm. Electrocardiographic studies almost daily through this hospitalization of 21 days showed no abnormality suggesting infarction. The record was within normal limits save for 1st degree A-V block, which had been present prior to admission.

The course was quite benign. He was placed on coronary precautions, and observed by cardiac monitor for 24 hours. He remained asymptomatic from the time he was in the emergency room, was afebrile and normotensive. Oxygen was discontinued on the 2nd day. Intravenous fluids were discontinued on the 3rd day. Progressive ambulation was begun on the 7th day. He had no pain from the time he arrived on the ward until discharge.

He was treated with quinidine sulphate 0.2 Gm. every 6 hours and phenobarbital 15 mg. 4 times daily. He was discharged on the 21st day on these medications. He had been on digitalis for about 2 years and this was discontinued while in

*From the Medical Service, St. Thomas Hospital, Nashville, Tenn.

the hospital. He has done well since discharge. We have seen him in the Clinic and he has had no symptoms of congestive failure.

DR. MILTON GROSSMAN: In this case, we are interested primarily in the ventricular tachycardia. I talked to this gentleman on two occasions. I did not see him when he came in, but it interested me that he had pain and distress while working, and became nauseated; he came into the Emergency Room and vomited. He was treated and everything seemed to be satisfactory. I asked him, "Were you ever aware of a fast heart beat?" His answer was "no." As you know, many patients who have a fast heart beat are aware of palpitation and it is interesting that this man had no such sensation. This is the only episode of which we know that this man has had of tachycardia of any kind, ventricular or otherwise. Would you like to ask him any questions?

DR. ROB ROY: I think you have already asked him whether or not the pain preceded the tachycardia or the tachycardia preceded the pain. Apparently he was not aware of it.

DR. M. GROSSMAN: He was not aware of it.

DR. DEE BAKER: Have you had any pain at all in your chest since then?

PATIENT: No.

DR. BAKER: Not before?

PATIENT: Well, some, but not a great lot.

DR. BAKER: Was the pain like that you had before?

PATIENT: Yes.

DR. BAKER: What type of pain was it?

PATIENT: Well, it was more or less a tightness in the chest.

DR. BAKER: Do you remember when you first had tightness in your chest, the first time you ever had any tightness?

PATIENT: No, because it would go a way back.

DR. M. GROSSMAN: There is one thing that I would like to clarify right now. Dr. High mentioned that he had a rate in excess of 250. It seems to me that rate is rather rapid although it does occur.

I would like to make a few remarks on the electrocardiographic diagnosis of ventricular tachycardia and then Dr. Sell and Dr. Adams will take over. Ventricular tachycardia is, as you know, a condition in which there are three or four rapid ectopic beats, each having a QRS duration of 0.12 seconds or greater. Ventricular tachycardia may be regular or irregular. Actually, when the P-waves are seen they are usually at a slower rate and are usually quite independent of the ventricular beating. The only times the auricular activity is related to the ventricular beating are two. First, either a captured beat, one that gets through and activates the ventricle or, second, when there is retrograde conduction, and then there will be a nodal beat following each ventricular complex. Also, one may see an occasional nodal beat get through, in which case there would be a retrograde block either complete or partial. In ventricular tachycardia the rate may be fast and regular, or it may be irregular. When ventricular tachycardia comes in short bursts it is called repetitive ventricular tachycardia and the first beat is usually a premature one and the last beat will show a compensatory pause. A special form of ventricular tachycardia seen in the electrocardiogram is called bidirectional ventricular tachycardia. One beat comes from one ventricle and the alternate beat from the other ventricle, so there are two foci. This is usually due to digitalis intoxication. In ventricular tachycardia, what happens in the auricles is frequently not too important because the auricles only rarely activate the ventricles in this condition. In ventricular tachycardia the auricles are probably beating independent of the ventricles. Frequently we do not know the exact mechanism that is occurring in the auricles. One may see sinus bradycardia, sinus tachycardia, or a sinus arrest in the auricles. Actually, sinus arrhythmia is not uncommon. Now, the auricle may also have other mechanisms at these times. A supraventricular tachycardia may be present in the auricles at the same time that a ventricular tachycardia is present in the ventricles. Auricular flutter or auricular fibrillation may be present in the auricles. Most frequently the mechanism in the auricles is not too important until one has broken the ventricular tachycardia and then the mechanism which is

occurring in the auricles is much more important.

Now, let's see the first slide. What are the electrocardiographic changes to be seen? What do we tend to get confused with when we look at a tracing like this? We have diagnosed this tracing as ventricular tachycardia, though, of course, a number of physicians might examine this tracing and some would say it may not be ventricular tachycardia. One would be hard-put to justify this diagnosis in many cases. Actually, we see a widened QRS, a very rapid rate, and some irregular waves in part of the QRS. The type of electrocardiographic changes which would simulate this are as follows: First, this could be supraventricular tachycardia with an IV conduction defect. Of course, in supraventricular tachycardia one may or may not see P-waves. If there were an IV conduction defect, one would see a widened QRS and, actually, a rate of 250 is more likely to be supraventricular than ventricular. This could be supraventricular tachycardia with aberrant ventricular conduction, which would give very much the same sort of appearance. What else could it be? Without other changes, the named possibilities plus ventricular tachycardia are the principal choices. At other times one might look at a tracing, particularly when there is an irregular beat, and not know whether it was a ventricular tachycardia or something else. I would like to mention two other possibilities. (1) Auricular fibrillation with a bundle branch block and a rate that is very rapid would make it very difficult to determine whether or not it represents auricular fibrillation or ventricular tachycardia. Another possibility is auricular flutter, either regular or irregular, with bundle branch block; it would be very difficult to differentiate this from a ventricular tachycardia. All of this leads to a point I would like to make,—it is sometimes rather difficult to be certain of the diagnosis of ventricular tachycardia, and frequently one has to make a decision rather quickly in order to start treatment.

Dr. Sell will now discuss for us some of the causes and mechanisms associated with ventricular tachycardia.

DR. GORDON SELL: The patient presented has a good example of the type of heart disease commonly associated with paroxysmal ventricular tachycardia. He has serious organic heart disease, having had a well documented myocardial infarction, has angina of effort, and has coronary artery disease.

Other serious heart lesions frequently associated with ventricular tachycardia are the cardiac myopathies, hypertensive heart disease, valvular heart lesions such as aortic stenosis and insufficiency, and ventricular aneurysms. Because this arrhythmia is so frequently associated with serious organic heart disease, it is regarded as the most serious for it carries a high mortality rate, in part due to the deleterious effects of a tachycardia on a damaged heart, and then because it is, only too frequently, the precursor of ventricular fibrillation.

On the other hand Dr. Adams has reported a group of patients, mainly children and young adults, with normal hearts who have had attacks of paroxysmal ventricular tachycardia. Dr. Grossman emphasized the difficulty in making the electrocardiographic diagnosis of ventricular tachycardia as opposed to supraventricular tachycardia with aberrant ventricular conduction. One was taught that the differential diagnosis could be accomplished at the bedside, by noting the rate, the regularity or irregularity of the rhythm, and by observing the presence of venous "cannon" waves in the neck veins. I think that all of these clinical signs may be confusing and can occur in both varieties of tachycardia and that the true incidence of the so-called functional variety of ventricular tachycardia may be over estimated.

A recent report from Sweden is interesting. The authors analyzed all the cases of paroxysmal tachycardia occurring in infancy from several clinics over a ten year interval. Of some 80 patients studied, they were unable to find one with ventricular tachycardia, although there were numbers having electrocardiographic findings of a tachycardia with widening of the QRS complexes.

However, since the advent of cardiac catheterization and of cardiac surgery, par-

ticularly during deep hypothermia with patients being electrocardiographically monitored, we have seen many instances of ventricular tachycardia. It is by no means uncommon during cardiac catheterization, when the catheter tip is just inside the tricuspid valve or near the outflow of the right or left ventricle, to see runs of three or more ventricular ectopic beats. Fortunately these occurrences are usually benign, for when the catheter is moved away the paroxysm promptly subsides. Needless to say, however, these attacks are not naturally occurring.

I have mentioned hypothermia, particularly deep hypothermia, as a predisposing factor to ventricular tachycardia. There are many others. Hydrocarbon anesthetic agents, particularly if associated with the use of sympathomimetic amines for hypotension, anoxia, acidosis, hypercapnia, and electrolyte imbalance, particularly hypokalemia, all favour the occurrence of tachycardia. Overdosage with the cardiac drugs we employ for the treatment of tachycardia, namely digitalis, quinidine, and procaine amide is probably the most frequent iatrogenic cause of paroxysmal ventricular tachycardia.

DR. M. GROSSMAN: I would like to ask Dr. Sell if he mentioned anything about the role of potassium in the causation of arrhythmias.

DR. SELL: You are now getting down into the realm of electrophysiology of cardiac cells, and in particular of the specialized nodal and conducting tissue cells. The excitability of these tissues depend in large measure on the ability of their cell membranes to rapidly transfer potassium out with excitation and to return it back into the cell with recovery—the so-called potassium flux. Both quinidine and digitalis tend to depress excitability; the former by stabilizing the membrane to potassium flux and the latter by making the membrane more permeable to potassium ions. Depression of excitability of these tissues causes them to have increased spontaneous rhythmicity.

Cardiac surgeons in the recent past have been injecting potassium in high doses into the coronary arteries to arrest the heart. Conversely, low serum potassium levels tend to precipitate arrhythmias. This is well known with digitalis therapy, for the standard method of treating a digitalis induced arrhythmia is with potassium.

The recent popularity of the oral diuretics of the chlorothiazide type, which cause potassium loss through the kidneys is potentially dangerous in a patient receiving digitalis. Supplementary potassium by mouth under these circumstances is a necessity.

DR. M. GROSSMAN: Thank you, Dr. Sell. Now, in part of your remaining time, Dr. Adams will discuss the treatment of ventricular tachycardia. We know of course that past treatment has not been too bad and has not been too good, but rather recently we have had a new form of treatment that perhaps will be of benefit to us.

DR. CRAWFORD ADAMS: Ventricular tachycardia must be considered as a grave emergency, especially if the tachycardia follows underlying myocardial infarction or severe congestive failure. There are two types of ventricular tachycardia and Corday refers to these as benign or malignant. In the benign type, the ventricular impulse originates at the apex of the heart and propels the blood upward through the outflow tract in a normal direction thereby maintaining an adequate cardiac output and, in turn, an adequate coronary and cerebral vascular perfusion. In the malignant type, the ventricular focus originates near the base of the heart and propels the blood downward toward the apex. The pulmonary conus is partially contracted which interferes with ventricular ejection and cardiac output is inadequate.

The benign or functional type of ventricular tachycardia occurs in approximately 10 to 17% of all reported series. The benign, functional type occurs in the younger age group and may be found with an electrolyte disturbance, fear, anxiety, or occasionally following toxic effects of tobacco or alcohol. In the benign type, the patient may not appear acutely ill, and may only complain of a "choking sensation" or "fluttering" of the heart. In the malignant type the patient is acutely ill, and appears moribund.

Before heroic therapy is applied, we must be certain that we are not dealing with sinus tachycardia with underlying bundle branch block, or aberrant ventricular conduction, or nodal tachycardia with aberrant ventricular conduction, or the WPW syndrome with tachycardia. If there is sinus tachycardia with an underlying bundle branch block, quinidine intravenously will increase the degree of block to complete cardiac arrest and death of the patient. On the other hand, the administration of digitalis in the presence of ventricular tachycardia may increase ventricular irritability and initiate ventricular fibrillation.

The first consideration of treatment is to allay apprehension by adequate sedation. Morphine or Demerol intravenously are most effective, and facilitate subsequent medical or mechanical therapy. If the tachycardia is the result of an emotional upset, anxiety, or fear, sedation alone is usually sufficient to control the arrhythmia. Quinidine and procaine amide are drugs of choice for all instances of ventricular tachycardia, and during the past 40 years have proven their effectiveness. Occasionally resistance is encountered, and then a variety of other drugs have been employed with individual reports of success. If the patient does not respond to medical therapy, mechanical reversion may be employed utilizing D.C. cardioversion.

Quinidine acts by stabilizing the flux of potassium across the cell membrane and by depressing excitability of the myocardium. One or two words of caution regarding quinidine. It is a very dangerous drug when given intravenously and, if used by this route, should be diluted with at least 50 cc. of water or saline and then given very slowly. If given rapidly, heart block, cardiac arrest, or arrest of the respiratory center may occur.

If the patient is critically ill or in shock, intravenous procaine amide (Pronestyl) is the drug of choice. One to 2 Gm. diluted with 200 cc. of D5W, or 100 to 300 mg. may be given intravenously without dilution depending upon the critical condition of the patient. During the administration of these drugs, continuous monitoring with the electrocardiograph is advisable, and if further widening of the QRS component occurs the speed of administration should be reduced or curtailed. Pronestyl has a hypotensive effect and if hypotension occurs, one of the pressor amine drugs may be utilized to stabilize the blood pressure during the administration of Pronestyl. Once reversion occurs, either quinidine or Pronestyl may be employed for maintenance of a regular sinus rhythm. Quinidine (0.2-0.4 Gm.) or Pronestyl (250-500 mg.) every 4 to 6 hours is usually adequate.

With resistance to reversion, the addition of potassium to quinidine may prove successful provided the patient has an adequate renal output. Potassium is especially of value if the patient has been receiving digitalis, if there is a history of prolonged diarrhea, or if the patient has been taking antihypertensive or diuretic agents. A normal serum potassium does not exclude the possibility of a low intracellular potassium. Ventricular tachycardia, flutter or fibrillation usually produce myocardial damage which is followed by intracellular loss of potassium. The replacement of potassium to the intracellular environment will nullify ventricular irritability.

Vasopressor drugs are of particular value if there is profound hypotension. The vasopressor agent may be diluted with 10 to 20 cc. of water and given slowly intravenously. As the blood pressure improves there is an increase in flow followed by reversion to a regular sinus rhythm. During the past 20 years, many other drugs such as magnesium sulphate, procaine, atropine, and quinacrine Hcl. (Atabrine) have been utilized in the treatment of ventricular tachycardia, though quinidine and Pronestyl have stood the test of time and are the most reliable.

A word about "cardioversion" or the electrical depolarization of the heart during a safe portion of the cardiac cycle. The present recommended therapeutic regimen is to first administer quinidine. The route employed depends upon the urgency of the situation. The patient is then given sedatives, either a barbiturate or opiate, followed by the intravenous administration of sodium pentothal to produce a state of amnesia. While the cardiac rhythm is con-

tinuously monitored, external electrodes are applied, one anteriorly and one behind the left shoulder or in the midaxillary line. Progressive increase in voltage is applied utilizing the DC defibrillator until conversion occurs. The patient is then observed for a 30 minute period to assure success.

DR. M. GROSSMAN: We have just a few minutes left. Are there any comments from the floor?

DR. LAURENCE GROSSMAN: Did this man ever have extrasystoles once his rhythm had reverted; were they noted on subsequent daily electrocardiograms?

DR. M. GROSSMAN: No.

DR. L. GROSSMAN: That brings out a point of interest. We had a man at Vanderbilt University Hospital several years ago who had many bouts of recurrent ventricular tachycardia, many of which were refractory to treatment, and who had a large calcified ventricular aneurysm. He was in congestive heart failure for awhile, and was digitalized. He did have a low serum potassium. Finally, in desperation, digitalis was stopped. He had been digitalized over a period of many years and had taken a small daily maintenance amount. Once we stopped the digitalis he definitely never had another bout of ventricular tachycardia. I wonder if this might not be applicable to our present patient. Another comment I would like to make is in regard to a different method of giving Pronestyl, the way this man was given the drug, as I understand, in the Emergency Room. The drug is given without dilution and was given intravenously at a timed rate of 100 mg. per minute. The administration of Pronestyl in this manner is constantly monitored with the EKG.

DR. M. GROSSMAN: I believe we should all remember this. Potassium is really an anti-arrhythmic drug and I think we can all recall cases in which we have used it. I had one patient who had a ventricular aneurysm and who had recurrent attacks of ventricular tachycardia, always reverted with Pronestyl intravenously. The only way we have been able to completely prevent these attacks is by adding large doses of potassium to his daily regimen of oral Pronestyl. He has been on 4 Gm. of potassium chloride daily even though he is not on digitalis and he has no cause for low serum potassium. I believe perhaps we should consider using more often potassium in patients who have adequate renal function. . . . Are there any other questions or comments?

DR. ROY: I have a question. There are situations where we can't be sure of the diagnosis and there is a question about whether it is ventricular tachycardia or aberrant conduction or bundle branch block —in this situation, if you are not sure, will this influence your thinking any as far as the use of drugs versus the use of the defibrillator?

DR. M. GROSSMAN: Would you like to answer that, Dr. Adams?

DR. ADAMS: Clinical judgement should be exercised in evaluating this problem as there are a few clues that do indicate ventricular tachycardia. (1) If we listen carefully, there may be a varying intensity of the first apical sound. (2) If we carefully observe the jugular veins, we may see an occasional "cannon wave" due to the atria contracting while the ventricles are in a state of systole, and (3) this will also produce an audible "fourth heart sound." If there are no identifiable P-waves on the electrocardiogram, an esophageal lead will usually demonstrate atrial activity, and differentiate the arrhythmia.

DR. M. GROSSMAN: I would like to also add to that comment. All of us who are in practice know that frequently these situations are very difficult. One has a patient who is very sick and is vomiting. It is difficult to look for A waves, it is difficult to listen to the sensitive sounds,—these items are wonderful for theoretical consideration when facilities are available in the non-emergency type of case. I would like to answer Dr. Roy's question in this manner. First, I think if we really consider the possibility of either auricular flutter or paroxysmal supraventricular tachycardia, we do whatever we normally do to try to break such a tachycardia from the use of carotid sinus pressure on down. Frequently, if it is something like that, it will then "break" and the problem will be solved. The only

other answer I would say—if you are ever in serious doubt that it is either ventricular tachycardia or a nonventricular tachycardia of supraventricular origin, the best thing to do is to treat for ventricular tachycardia. I think you are safer that way and perhaps will make fewer mistakes. Would you agree with that, Dr. Adams?

DR. ADAMS: Not entirely, since the incidence of sinus tachycardia with an underlying bundle branch block is greater than the incidence of ventricular tachycardia and, as previously mentioned, if there is an underlying bundle branch block quinidine may increase the degree of block to the point of complete cardiac arrest. Therefore I think that every effort possible should be made to establish the proper diagnosis before "blindly" treating the patient with quinidine.

Detection of Fainters and Epileptics in Young Adult Population—R. H. Mewburn and W. C. Gibson

Canad Med Assn J **88**:641 (March 30) 1963

A screening procedure for the detection of fainters as well as epileptics was tested on 212 university student volunteers. There was no history of epilepsy in the series but four definitely abnormal electroencephalograms were recorded. As a supplement to routine electroencephalography various circulatory stresses were applied with the subject sitting upright. The application of needle electrodes to the scalp was itself a potent stimulus to fainting. Under these conditions 16 of the 21 subjects with a history of repeated fainting were detected by their cardiovascular response to electrode placement or ocular compression. The use of painless pad electrodes reduced the total stress and produced inferior results. The authors believe that by careful adjustment of total stress intensity the majority of habitual fainters can be detected. *(From JAMA.)*

CLINICOPATHOLOGIC CONFERENCE

Baptist Memorial Hospital*

This 43 year old white woman was first admitted to this hospital in May, 1960, at which time the diagnoses of acute and chronic cholecystitis, polycystic kidneys, and hypertensive cardiovascular disease were made. She had a cholecystectomy and an additional diagnosis of cholecystolithiasis was made.

There was a history of having been treated with x-ray for carcinoma-in-situ of the cervix diagnosed 4 years previously. No residual carcinoma could be found upon physical examination. At the time of operation a cervical biopsy was done, reported as showing focal atypical hyperplasia of the cervix which was short of carcinoma in-situ. It was recommended that a cone biopsy be done for further evaluation.

The patient made an uneventful recovery from the cholecystectomy and was discharged on June 1, 1960 to be followed on an outpatient basis. There is a note in the old chart that a supraclavicular biopsy was done in 1958 here because the patient had "spots on her lungs." Pathologic diagnosis was "questionable Boeck's sarcoid." This diagnosis was never subsequently established with any degree of certainty, although the patient was followed as an outpatient until her final admission.

A sister died of tuberculosis in 1955.

The patient was again admitted to this hospital on Aug. 20, 1962 with a history of treatment of a possible duodenal ulcer 3 weeks previously by a local physician. At that time (Aug. 1) she was passing tarry stools, though she had noted that some of the stools contained bright red blood. While hospitalized elsewhere, she was given 3 blood transfusions and was placed on an ulcer regimen. There was no history of hematemesis and she denied an alcoholic history or dietary intolerance. A barium enema during this previous hospitalization was said to show diverticulosis of the descending and sigmoid colon with no evidence of diverticulitis. She had been discharged on Aug. 7, after a hospitalization of 6 days.

Following her discharge from that hospital, she felt better with her chief complaint in the interim being marked constipation requiring almost daily enemas. She had no further bleeding. Her appetite returned and she was generally feeling quite well. On the afternoon prior to admission while walking in her yard she had a sudden onset of lower abdominal cramping pain. The pain was continuous and gradually increased in severity. She was slightly nauseated but did not vomit. Her last bowel movement was the night before. There was no burning or dysuria; the diffuse lower abdominal pain persisted and she complained bitterly of it. There had been no weight loss.

Physical examination revealed an acutely ill, rather obese white woman. She was clammy, with a B.P. of 140/80 and P. of 100 which was regular. Pertinent physical findings were localized to the abdomen. There was abdominal tenderness in both lower quadrants with questionable rebound tenderness. There was moderate muscle spasm. Though no definite mass was felt there was a fullness in both lower quadrants. Bowel sounds were present but decreased. Pelvic examination showed marked vaginal scarring and uterine fixation. Rectal examination was negative.

An exploratory laparotomy was done at 1:05 a.m. on Aug. 21. The patient tolerated the operation well and was sent to the Recovery Room in good condition. She did not breathe well without positive pressure oxygen and the B.P. dropped to 90/60. The heart rate rose from 90 to 140, tachycardia apparently being secondary to acute hypotension. The patient broke out in a profuse cold sweat and lapsed into unconsciousness. She was given stimulants, but over the next three or four minutes the B.P. was not obtainable, the patient ceased breathing, and there was no pulse or heart beat. Tracheostomy and thoracotomy with internal cardiac massage were done but the patient had only one or two evidences of cardiac activity by EKG. and could not be revived. She expired at approximately 4:30 a.m. on Aug. 21, 1962.

Laboratory studies on admission showed a PCV. of 36, Hgb. of 11:5 Gm., WBC. count 8,100 with 90% polys., 5% lymphs. and 5 monos. Urinalysis showed a Sp. Gr. of 1.012, protein 1+, sugar and acetone negative. There were 6 to 10 WBC. and 2 to 5 RBC. noted on microscopic examination. Other laboratory studies done on admission included a BUN. of 55 mg. per 100 ml., sodium of 130, potassium of 2.5, chloride of 88 and bicarbonate of 35 mEq/L. An EKG. was read as abnormal with nonspecific ST and T wave changes.

DR. MAURY BRONSTEIN: In the clinical abstract, before the paragraph that starts "following her discharge," there should be inserted that an upper G.I. series showed some irritability of the duodenal cap without an ulcer crater being visualized. The discussant was made aware of this about a week ago, so this does not come as a surprise to him.

DR. ALPHONZO H. MEYER, JR.: In the discussion of this case there are several avenues which we must pursue. First, it is important to ascertain the source of the bleeding—whether it came from the upper G.I. tract or the lower G.I. tract. Secondly, we would like to know the cause of it and to relate this, if possible, to her previous

*From the Department of Pathology, Baptist Memorial Hospital, Memphis, Tenn.

history or possibly to come up with an unrelated cause. Thirdly, we want to know the cause of the abdominal pain and whether or not this was related to the previous gastrointestinal bleeding. Then we would like to know the cause of the alterations in the blood chemistries such as the elevated BUN, the hyponatremia, hypochloremia, and hypokalemia. We would also like to know what was found at operation, what happened to the patient in the Recovery Room and what the cause of death was in the Recovery Room.

We will take up first the source of the bleeding. The patient was stated to have passed tarry stools and also bright-red blood. As you know, tarry stools are usually due to bleeding in the upper gastrointestinal tract, the action of hydrochloric acid on the hemoglobin reducing it to acid hematin and giving the stool the characteristic color. Tarry stools can come from bleeding low in the G.I. tract if the blood remains in the lumen of the intestine for a considerable time. Ordinarily, though, bright red blood comes from bleeding somewhere low in the G.I. tract. It can come from high in the G.I. tract provided there is brisk bleeding and the blood passes rapidly through the intestine. From the data available, I do not think it possible to determine exactly where the bleeding was coming from. Since the patient was given in a hospital elsewhere only three pints of blood, it would seem that she could not have bled very much or very rapidly, otherwise, she would have required more transfusions. Nevertheless, in my opinion, it is impossible to state whether this was bleeding from the upper or lower G.I. tract.

Insofar as causes of bleeding are concerned, we might take up first those which can be related to the previous history of the patient. The record states that she had been treated for carcinoma in-situ of the cervix. This lesion never metastasizes. If the diagnosis proved to be wrong, metastases could occur, and there is a possibility of metastatic carcinoma to the G.I. tract with bleeding from this. She had also been treated with irradiation, so we have to consider bleeding from an irradiation proctitis or colitis. However, there was a considerable length of time following irradiation therapy for hemorrhage to be a sequel. She had not had diarrhea which usually accompanies this lesion. So I think that we can probably rule this out as a cause of bleeding.

Since she was said to have had hypertensive cardiovascular disease, I think we need to consider bleeding from an abdominal aneurysm, which has ruptured into the gastrointestinal tract. Probably the most common site for this to occur is into the third portion of the duodenum. This would account for the x-ray appearance of irritability of the duodenal cap and would of course explain the blood in the G.I. tract. Another thing that is remotely related to her previous history is bleeding from a Meckel's diverticulum. We know that the patient had polycystic kidneys and this is frequently associated with other congenital anomalies. It is possible that she had a Meckel's diverticulum, which had not caused previous symptoms and which began to bleed.

Among the most plausable causes of bleeding which are unrelated to her previous history and which I think may be considered is first of all a bleeding duodenal ulcer. As you know, the G.I. series showed no ulcer crater. However, there are postbulbar ulcers which are missed by the radiologists, and these can certainly give rise to acute hemorrhage. One thing I think we ought to mention in passing is the possibility of a reserpine-induced ulcer. Several cases have been reported. We are told the patient was hypertensive and there is then a possibility that she may have been treated with reserpine. A second possible cause unrelated to the previous history would be bleeding from a diverticulum of the colon, which we know she had as shown by barium enema. Other unlikely possibilities are bleeding from a benign small bowel tumor, such as a leiomyoma, an angioma or a carcinoid tumor, or from such lesions as polyarteritis with rupture of a vessel into the G.I. tract, or a venous mesenteric vascular occlusion. Polyarteritis can be dismissed because the patient had had no other symptoms suggestive of the disease, although her later acute attack of pain could have been due to polyarteritis with rupture of vessel into the retroperitoneal space

though she had no other symptoms or signs of polyarteritis. I really tend to discount this as a diagnosis, though I may be sorry. Small intestinal tumors can be dismissed also, since the patient never really had any signs or symptoms of obstruction, and we have nothing upon which to base this diagnosis except G.I. tract bleeding.

Bleeding from a diverticulum certainly can occur. There are some who think bleeding is more common from diverticulosis than from diverticulitis. We have no evidence that she ever had diverticulitis, but we do know that she had diverticulosis. Next comes venous mesenteric occlusion. The reason I say "venous" is because the process from the time the bleeding began up to the time of the patient's demise was a period of some three weeks, and I don't think that an arterial occlusion would have lasted for that length of time. However, it is possible for venous mesenteric occlusion to be associated with symptoms which carry on for a period of hours, days, or sometimes weeks. I think this is a possibility, which we should certainly strongly consider.

Let us go on now to discuss her terminal illness, which began on August 20 and ended the following day. This was characterized by a sudden onset of severe lower abdominal pain associated with evidence of shock and a clammy appearance. She had considerable tachycardia. She had a blood pressure of 140/80, which is probably considerably below her normal pressure and which may represent shock for her. The things we must consider as possibly producing this picture are probably one or any one of three things: first, an acute hemorrhage either into the peritoneal cavity or into the retroperitoneal space; second, a perforated viscus; and third, a sudden vascular occlusion. We will talk briefly about the possibility of a perforated viscus first.

The patient was treated previously for a duodenal ulcer, and she may have had a perforation of it. Such an event gives rise to a sudden onset of severe abdominal pain. It may be associated with a shock-like state. However, the pain is usually in the upper abdomen, which is characterized by a generalized board-like rigidity. This patient's findings just do not fit that picture. A perforated diverticulum gives rise to sudden onset of acute pain in the abdomen, usually in the left lower quadrant. This is frequently associated with shock, because of the very high toxicity of the colonic contents. Usually a perforated diverticulum is preceded by some evidence of diverticulitis, and we do not have this in this particular case. I think we can probably rule out this possibility. Let me mention in passing the possibility of perforation of a tuberculous ulcer of the ileum. The only reason I say this is because the patient was reported as showing "spots" on her lungs and she had a sister who died of tuberculosis in 1955. I do not think we have any basis upon which to substantiate this diagnosis. A Meckel's diverticulum should be mentioned because she had polycystic kidneys, and such a diverticulum may perforate. Usually it gives rise to a picture much akin to acute appendicitis, and this does not appear to be the picture in this case so I think we can more or less rule out that possibility.

When we consider hemorrhage as a cause of her acute symptoms, one must mention a spontaneous rupture of the spleen, which is sometimes seen in sarcoidosis. I mention this because of the questionable diagnosis of Boeck's sarcoid from the supraclavicular node biopsy. We do not have any of the other symptoms of sarcoid, such as lesions of the skin, or bone. She had no pulmonary symptoms, so I do not think we have enough evidence to make this diagnosis. Furthermore, the clinical picture is not that of a ruptured spleen, which begins with left upper quadrant pain and signs which are maximal in that area. Polyarteritis with rupture of a vessel into the retroperitoneal space and retroperitoneal hematoma we have already mentioned. I do not think we have enough to substantiate that. Rupture of an abdominal aneurysm into the peritoneal cavity is a definite possibility, especially one that had bled previously into the G.I. tract and then ceased, after which it ruptured secondarily into the peritoneal cavity. I think it would be uncommon to see one in a person of this young age; however, I cannot entirely rule it out. There is no report on any of the x-ray studies of calcified areas along the course of the major arteries.

There are several entities, which we

should mention chiefly to exclude. Acute pancreatitis will give rise to sudden onset of acute abdominal pain and may produce a shock-like picture. The pain is usually in the upper abdomen. We really do not have anything in this case for this diagnosis. There is no report of determination of amylase or lipase, and I mention it only in passing as a possible producer of this general picture. Sudden coronary occlusion probably can be excluded because when this causes abdominal pain it is in the upper abdomen. A dissecting aneurysm of the aorta is mentioned only in passing, too. She had none of the other symptoms such as a syncope.

Then we come to the category of sudden vascular occlusions, chiefly mesenteric vascular occlusions, and we have to discuss venous and arterial occlusions. Arterial mesenteric occlusions are usually seen in two categories of patients. One is the young patient with vegetative cardiac valvular disease, which we have no reason to suspect in this patient. The other is the elderly cardiac patient with a possible auricular fibrillation with a mural thrombus. She does not fit that status either. Furthermore, arterial mesenteric vascular occlusion is a rapidly progressive clinical disease, and if we try to tie in the previous bleeding with the diagnosis of the final acute abdominal pain I think we cannot use it. Venous mesenteric vascular occlusion, on the other hand, may extend over a prolonged period. It is entirely possible that the initial source of the G.I. bleeding was due to such an occlusion. We do not have any history in the protocol of exactly what type of symptoms she had except for the bleeding from the G.I. tract. We would usually expect some pain with this. The subsequent history of severe constipation would go along very nicely with the diagnosis of mesenteric venous occlusion. Then with further propagation of the thrombus, the acute terminal episode could be explained.

Trying to arrive at some satisfactory explanation of the blood chemical findings leaves me without an answer. The elevated plasma urea nitrogen can probably be attributed to the polycystic kidneys with pending renal failure. The patient does not give any history of vomiting or diarrhea, nor is there anything else upon which to base an explanation for the fall in the serum sodium, chloride and potassium.

We can only speculate upon the operative findings and what was done. This is entirely dependent upon the diagnosis, and I have already discussed that. The patient apparently tolerated the surgery well, and was doing satisfactorily when she arrived in the Recovery Room; she then developed trouble in breathing and went into shock. The pulse rate increased and the blood pressure fell to 90/60, which is shock for anyone and probably severe shock for her. At this point she probably had considerable cerebral anoxia leading to unconsciousness. It would be my guess that the respiratory center was affected because she suddenly ceased breathing. She probably had a cardiac arrest as a result of anoxia. What part the hypopotassemia played in this is something about which we could also theorize. Probably it was responsible in some degree for the cardiac arrest. Then, putting the whole picture together, it leads me to conclude that we have a good chance for a variety of diagnoses. I think the major diagnosis boils down to two prospects: (1) rupture of an aneurysm involving one of the abdominal vessels into the G.I. tract, producing the bleeding and then later rupturing into the peritoneal cavity to produce the final picture, and (2) the other possibility is a mesenteric venous occlusion. I think this would explain the whole picture from August 1. The only reason I would place this latter as my primary diagnosis would be on a statistical basis, since the last CPC had a rupture of an arterial aneurysm!

DR. BRONSTEIN: Thank you very much, Dr. Meyer. Dr. Booth, do you have some x-rays we can look at?

DR. JAMES L. BOOTH: These first two sets of films consist of an intravenous pyelogram and were taken two years before the patient's demise. The first set shows a nonfunctioning extremely large kidney. Here can be seen very large polycystic kidneys. On the KUB. film there is a ring shadow in the right upper quadrant. This probably represents a gallbladder calculus.

The next set of films were made two years before the patient's death. Here there is seen a nonfunctioning gallbladder. I do not definitely see the ring calcification here, but it is seen on the films of a G.I. series. The patient's stomach did not fill out well at its lower end, and there is a marked deformity of the duodenal cap, which will not go along with the history we have in the protocol. We do not see a duodenal ulcer, and you will notice how the stomach is displaced by the large kidneys.

You recall in the history that one of the diagnoses was Boeck's sarcoid based upon a supraclavicular node biopsy. The next film was made two years after the biopsy of supraclavicular area. It shows a diffuse nodularity not unlike Boeck's sarcoid; there is no pulmonary hilar adenopathy, and the heart appears normal in spite of the fact that the patient was said to have been hypertensive. As you recall from the history, the patient came into this hospital on August 20th, and for some reason some x-ray findings taken then are not in the protocol. I think it would have helped Dr. Meyer if he had known that she had an upright chest film, which obviously has air under the diaphragm. I do not know why, but obviously the patient did have a ruptured viscus. The patient has been in another hospital and had a barium enema at that hospital, and you can see the barium in the plain film. You can also see a few diverticula.

DR. BRONSTEIN: I have just looked through the chart again and that x-ray report is in the chart. It is my mistake that it was not included. I did not do it intentionally. Dr. Meyer, do you want another half a minute to revise your diagnosis on that basis?

DR. MEYER: Well with the information just given me I would be foolish not to revise completely the list of probable lesions which this patient had when she expired. There are three lesions which occur to me—they are peptic ulcer, diverticulitis with perforation and a ruptured Meckel's diverticulum. The rupture of a peptic ulcer should be excluded because of the location of the pain. In the absence of any history of diverticulitis, I would also exclude the probability of a ruptured diverticulum. This leaves my third and final guess, which is a ruptured Meckel's diverticulum. The patient's history would not suggest involvement of the appendix.

DR. EUGENE R. NOBLES, JR.: The possibility of a perforated carcinoma of the cecum ought to be raised. The history of the patient's having a hemorrhage in her G.I. tract recently and requiring three transfusions might tie in nicely with the existence of a carcinoma in this region.

DR. JACK GREENFIELD: While this additional possibility rarely occurs, I think we should consider the rupture of a viscus based upon a torn adhesion. This is mentioned particularly because of her prior surgical history.

DR. BRONSTEIN: In the absence of additional time we will learn what the findings at autopsy were.

DR. MERLIN L. TRUMBULL: In May, 1960, the removed gallbladder showed extensive acute and chronic inflammation as well as calculi. The gallbladder wall was relatively thick, and the inflammatory reaction suggests the presence of this acute process existing for a number of days. It was during this hospitalization that the diagnosis of polycystic kidneys was first made. Also the protocol mentions that cardiovascular disease was present. My point in mentioning this is that at the time of autopsy her heart weighed 340 grams. This we would hardly regard as a hypertrophied heart. Furthermore, careful examination of her chest failed to record a single elevated blood pressure reading out of many recorded. There is, therefore, in my mind serious doubt that this patient ever had hypertensive cardiovascular disease. I suspect that this represents an incidence where a diagnosis was pinned on a patient without sufficient evidence and it continued to follow her.

The original diagnosis of carcinoma-in-situ of the cervix was made from a biopsy examined in our department. At the time of autopsy there was no evidence of disease which had spread from this lesion.

The next lesion which should be considered involves the kidneys. Two pictures illustrate both small and large cysts coming from this patient's kidneys, which weighed

850 and 740 grams respectively. Between the cysts one sees a reasonable amount of well-preserved parenchyma. This explains why the patient at age 43 apparently has not yet developed clinical evidence of renal impairment, although some of her BUN values were above normal even back in 1960.

Next there is the lesion which was seen by a lymph node biopsy during life and later in her lungs, principally at autopsy. These contained what we termed Boeck's sarcoid. Both the lymph nodes taken at biopsy, and in the lungs show lesions having apparently a wide range of ages, if we can assume that the fibrosis present in some of these was an index to the age to these. I believe it reflects the age, and others who have studied these lesions more intensively support this interpretation. Some of the lung lesions showed extensive fibrosis to the point that the initial classical discrete tubercle becomes fused with adjacent ones and the miliary lesion no longer is apparent. These lungs weighed 440 and 350 grams respectively. They were not remarkable except that the pleural and cut surfaces did possess several miliary, rather indurated small lesions exhibiting a gray color. Special stains on these lesions failed to reveal the presence of any organisms, so we still believe the diagnosis is Boeck's sarcoid. There is no evidence that this patient had symptoms from this lesion or that it in any way contributed to her final illness.

At the time of her cholecystectomy in 1960, the surgeons noted the presence of several thin-walled cysts on the superior surface of the liver. Some were also present at the time of autopsy. These measured up to 2 cm. in diameter, and relatively few were present both on the surface as well as in the interior of this organ, which weighed 2100 grams. In addition, careful inspection of the pancreas displayed a few cysts in the region of its head. These measured up to 0.5 cm. across. Some of the adjacent lobules of parenchyma showed varying degrees of atrophy, which were no doubt the result of the occlusion of ducts by these expanding cysts.

The most important part of this patient's autopsy findings was the direct result of the lesion in the descending and sigmoid colon. At the time we examined her, there was an exteriorized portion of descending colon. It contained over a 15 cm. length three perforations, the largest measuring up to 1.5 cm. in diameter. These perforations were partly filled by fecal material. In addition, this same portion of the colon contained numerous diverticula, many of them also filled with impacted fecal material. The remainder of the colon in this general region contained considerable very firm fecal masses. Microscopic examination through the margins of two of the perforations suggests that these sites originally represented diverticula. The serosal surface adjacent to the perforations was coated with varying amounts of almost pure fibrin. In other portions of the peritoneal cavity there was relatively little serosal reaction. Incidentally, no lesion which might represent an acute chronic or healed peptic ulcer was seen in the duodenum.

Finally, it seems rather difficult to explain the source of this patient's altered electrolyte picture. The results reported represented a single determination during her very brief final admission and were done just before operation. My best estimate for the basis of this altered picture is one due to marked loss of electrolytes through the profuse sweating which she is described as having had.

President's Page



Dr. Kampmeier

FREE WORLD MEDICINE

Dr. Annis recently reminded us of what we have commented upon previously on our Journal's editorial pages. Just as our Country is one in a Community of Nations, so we as physicians are part of the world's medical profession. We should, therefore, have an interest in the World Medical Association and its U. S. Committee which recently published *Your Leadership Role in Free World Medicine*. The A.M.A. is one of 58 private voluntary national medical associations of as many countries which make up the World Medical Association. Every physician will take pride in reading this brochure about the accomplishments of American medicine and, we hope, will become a member of this body. Thereby we can contribute to the protection and fostering of professional freedom wherever this is still possible. Here and there is the remaining countries with a "free" profession, the pressure for governmental control is on—the last in Belgium.

Shackling the medical profession pays off in a lower level of medical care. A year ago (June 1963) one of our editorials analyzed medical care under the National Health Service of Great Britain, after it had broadcast its *White Paper* on NBC television and after a critique of this had been written by a member of the faculty of Duke University Medical Center. Obviously, it was a sad story of far from ideal medical care.

The Tennessee Farm Bureau News (April 2, 1964) carried an interesting interview of a supervisor in an electronics firm of London, visiting friends in this State. He described the "National Insurance Card—Voluntary Contribution," which is *not* voluntary, a ratio of patients to doctor of three times the number in the U. S., his inability for two years now to get off the panel of his doctor whom he dislikes and to get on the panel of his wife's doctor, the change in doctors as one goes to a hospital, and the four dollars deducted weekly from his pay check and a like amount from his wife's pay check ($8.00 per week of "voluntary" contribution) even if they should decide to seek a private physician. (If this be true, anyone with paper and pencil can quickly estimate what type of insurance coverage he could buy in this country on $416.00 per year.)

I am reminded of a chance acquaintance with a New Zealand physician who shared a seat with me on the boat-train from Copenhagen to the ferry for Malmo, Sweden last summer. He had been on an official assignment to inspect the National Health Service of Great Britain. With little prompting he related the horrifying information he gained about delays of months in roentgenologic examinations and admissions to hospitals, because of the great back-log of patients awaiting either. Many of us had heard this before and wondered if it was true, though understandable if the office time available for each patient can be measured by a sandglass egg timer *(British White Paper)*—small wonder the patient is passed to other hands. After all—under any system of "free" medical care the headache of the "morning after" claims equal right of the doctor's time with the headache of intracranial disease!

Probably most of us in American medicine believe in our system of medicine—with professional freedom so far. If this is our belief we should support this *philosophy* on the World's stage by membership in the World Medical Association.



President

THE JOURNAL
OF THE
TENNESSEE MEDICAL ASSOCIATION
Published Monthly
Devoted to the Interests of the Medical Profession of Tennessee
Office of Publication, 112 Louise Avenue, Nashville 5, Tenn.

Acceptance for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized July 15, 1932.

Copyright for protection against republication. Journals of the American Medical Association and of other state medical associations may feel free to quote from this Journal whenever they desire merely giving credit to this publication.

Address papers, discussions and scientific matter to R. H. Kampmeier, M.D., Editor, B-4211 Vanderbilt University Hospital, Nashville 12, Tennessee
Address organizational matters to Jack E. Ballentine, Executive Director, 112 Louise Avenue, Nashville 5, Tenn.

R. H. KAMPMEIER, M.D., Editor
Vanderbilt University Hospital, Nashville

EDITORIAL BOARD

ADDISON B. SCOVILLE, JR., M.D.
2104 West End Ave.
Nashville 5, Tennessee

ALBERT WEINSTEIN, M.D.
Medical Arts Building
Nashville 12, Tennessee

COMMITTEE ON SCIENTIFIC WORK AND POST GRADUATE EDUCATION
R. H. KAMPMEIER, M.D., Chairman
W. POWELL HUTCHERSON, M.D., Chattanooga
ROBERT P. MCBURNEY, M.D., Memphis
EUGENE J. SPIOTTA, M.D., Memphis
(Specialty Society Representatives to be named)

JULY, 1964

EDITORIAL

POSTCATHETERIZATION URINARY TRACT INFECTION

Emphasis on the importance of the staphylococcus problem has made many physicians less aware of the increasing seriousness and prevalence of infections due to other organisms, particularly of the coliform group. Finland, Jones, and Barnes[1] observed a six- to seven-fold increase in the occurrence of bacteremia associated with strains of Escherichia coli, Klebsiella pneumoniae, Aerobacter aeruginosa, and Proteus species between 1935 and 1957. Gram-negative rod bacteremia is often associated with prior urinary-tract instrumentation. Such instrumentation includes catheterization, cystoscopy, and varying combinations of these procedures.

The incidence of postcatheterization infection varies widely but Kass,[2] Kleeman, Hewitt, and Guze,[3] and Jackson and Grieble[4] reported infection rates from a single catheterization of 2 per cent, whereas after 96 hours of indwelling catheterization the incidence rose to 98 per cent. The particularly high incidence of urinary tract infection in pregnant women and gynecologic surgery patients subsequent to catheterization warrants emphasis. Gillespie, Lennon, Linton, and Slade[5] found that multiple catheterization infected 52 per cent of gynecologic patients and 28 per cent of obstetrical cases.

Cystoscopy carries a risk also with a post-cystoscopy infection rate varying from 5 to 10 per cent.

There are two major viewpoints regarding the source of organisms contaminating the urinary tract.[6] One group feels that the primary mode is auto-infection from the gastrointestinal tract and the other group suggests that exogenous infection through the urethra is the primary mode of spread. This latter mode, the exogenous route, is probably the more common.

The susceptible tissue, that is, prostate, bladder, and kidneys, is deep and can be reached only via the urethra. There are three ways by which bacteria can reach the urinary bladder.

The distal several centimeters of the male urethra normally contain relatively large numbers of microorganisms which can be pushed into the bladder during catheterization. Secondly, microorganisms can ascend through the lumen of the catheter as studies have demonstrated that bacteria are able to ascend a stagnant column of urine. Thirdly, the indwelling catheter facilitates the entry of bacteria into the bladder not by means of the lumen of the catheter but by means of the mucous sheath between the catheter and urethral epithelium.

The sequelae of asymptomatic bacteriuria may be far ranging and appear to include diseases not usually considered to be infectious. How many patients with bacteriuria eventually develop chronic pyelonephritis is not known. However, the difficulty in eradicating chronic pyelonephritis imposes upon physicians the responsibility of preventing situations that predispose patients to its development.

The most important method of preventing urinary tract infection is to restrict the use

of the catheter to those instances where it is the only means of achieving otherwise unobtainable diagnostic information or therapeutic results.[7] Catheterization is no longer needed to obtain urine cultures, since it has been shown that clean catch specimens and quantitative cultures provide accurate and satisfactory information regarding the presence of bacteria in the urine of both children and adults. The risk of infection after indwelling catheterization is so great that this should be reserved for situations where mechanical continuity of the urethra must be maintained or supported or where urethral obstruction is present; and in the latter instance, even repeated, carefully done intermittent catheterization carries a smaller risk of infection than does the use of an indwelling catheter.

When the decision to use a catheter has been made, the manipulation should then be undertaken with a catheter of the proper size and with the most careful technique possible, both in regard to the mechanics of the procedure and the prevention of subsequent contamination. From bladder to bottle, continuous and unbroken asepsis must be maintained. This may include initially disinfecting the urethra, using as small a catheter as possible to minimize trauma, fixation of the catheter so that it does not move within the urethra and repeated cleansing of the urethral meatus with antiseptic agents are easily accomplished and should not be forgotten. Finally, rinsing the bladder with chlorhexidine prior to removing an indwelling catheter markedly lowers the incidence of postcatheterization infection.

The magnitude of this problem of urinary tract infection due to catheterization cannot be overemphasized. All personnel involved in the care of patients should be thoroughly trained to prevent postcatheterization infection of the urinary tract.

A. B. S.

References

1. Finland, M., Jones, W. F., Jr., Barnes, M. W.: Occurrence of Serious Bacterial Infections since Introduction of Antibacterial Agents, J.M.A. 170: 2188, 1959.

2. Kass, E. H.: Bacteriuria and the Diagnosis of Infections of the Urinary Tract, Arch. Int. Med. 100:709, 1957.

3. Kleeman, C. R., Hewitt, W. L., Guze, L. B.: Pyelonephritis, Medicine 39:3, 1960.

4. Jackson, G. G., Grieble, H. G.: Pathogenesis of Renal Infection, Arch. Int. Med. 100:692, 1957.

5. Gillespie, W. A., Lennon, G. G., Linton, K. B., Slade, N.: Prevention of Catheter Infection of Urine in Female Patients, Brit. Med. J. 2:13, 1962.

6. Sanford, J. P.: Hospital-acquired Urinary-tract Infections, Ann. Int. Med. 60:903, 1964.

7. Levin, J.: The Incidence and Prevention of Infection after Urethral Catheterization, Ann. Int. Med. 60:914, 1964.

PROGRAMS AND NEWS OF MEDICAL SOCIETIES

Washington-Carter-Unicoi County Medical Society

Dr. Walter C. Alvarez addressed the Washington-Carter-Unicoi County Medical Society on June 18 at the Johnson City Country Club. Dr. Alvarez, professor of medicine emeritus of the University of Minnesota (Mayo Foundation), and formerly a consultant in internal medicine at Mayo Clinic for 25 years. He edits *Geriatrics* and is emeritus editor-in-chief of *Modern Medicine,* and writes a widely syndicated newspaper column.

Jackson County Medical Society

The Society was host to a medical team representing the Middle Tennessee Heart Association on Tuesday, May 26th, at the Jackson County Hospital, Gainesboro. Dr. Jack Kinnard was in charge of the program which outlined the Stroke Rehabilitation Program sponsored by MTHA. His associates and assistants were Dr. Dee Baker, and Mr. Gene Sellars, R.N. The object of the program was to assist local physicians in caring for individuals who have suffered from a stroke and are convalescing in the home.

Chattanooga-Hamilton County Medical Society

A paper entitled "Practical Aspect of Handicap Prevention" was presented by Dr. Robert T. Miller at the July 7th meeting of the Chattanooga-Hamilton County Medical Society. In addition to an interesting case report by Dr. Harold B. Henning, Dr. Julius Michaelson, President of the American Academy of General Practice, Foley, Ala-

bama, spoke on "General Practitioner Education." The meeting was held in the auditorium of the Interstate Building.

Memphis-Shelby County Medical Society

Dr. F. J. L. Blasingame of Chicago, Executive Vice President of the American Medical Association, addressed the Memphis and Shelby County Medical Society on June 2nd in the Institute of Pathology Building. His subject was "Don't Let the Quacks Fool You." During his visit to Memphis, Dr. Blasingame also spoke before the Memphis Rotary Club and addressed the students of the University of Tennessee College of Medicine.

NATIONAL NEWS

The Month in Washington
(From the Washington Office AMA)

A new Food and Drug Administration regulation requires manufacturers to submit proof of effectiveness of drugs cleared between 1938 and June 20, 1963, and still on the market. This retroactive regulation was the most controversial of a group of new drug regulations issued under the Kefauver-Harris FDA act amendments enacted into law in 1962.

The Pharmaceutical Manufacturers Association said the government was "making a mistake in blanketing in drugs which have been regarded as old, safe and effective." The PMA questioned whether the FDA "has put too broad an interpretation on the 1962 drug amendments." In protesting such a regulation before it was issued in final form, the PMA said a retroactive regulation would comprise "such sweeping requests for information as to be unreasonably burdensome on the industry and ultimately on the Food and Drug Administration."

"The consumption of manpower, particularly of scarce, highly trained scientific personnel, that would be required to comply with the proposed regulations is staggering and bears no reasonable relationship to any possible benefit to the public. In fact the demand on the time of the scientific personnel of our member companies would be of such magnitude that it would impede and delay clinical research and the development of new drugs. Needless to say such a result would not be in the public interest."

Drug manufacturers had argued that so-called "grandfather rights" allowed them to continue to make claims contained in new drug applications cleared in the past, and that they should not now have to produce medical evidence to support these claims. FDA held that Congress, in passing the drug amendments in 1962, specifically made it the agency's duty to review all medical claims for "new drugs" cleared in the past on safety alone, "with the intention that any claim unsupported by substantial medical evidence should be discontinued after next October." The FDA held that the "grandfather clause" gives the right to make unsupported claims for only two classes of drugs: (1) those on the market before 1938 and therefore exempted from new-drug clearance by the 1938 Act, and (2) those introduced after 1938 which were generally recognized as safe and therefore were never cleared as "new drugs."

The new regulations require firms marketing drugs approved since 1938 to examine both their promotional materials and their clinical records to be sure that all claims being made are justified by experience and that the promotional materials include all necessary warnings, contra-indications, side effects, and untoward reactions which may have shown up after the drugs were originally placed on the market.

Under the old law, new drugs were cleared on the basis of safety alone. There was no requirement that they be shown to be effective as well as safe for their intended uses, other than that claims of benefits be supported.

★

Boisfeuillet Jones resigned as Special Assistant to the Secretary of Health, Education and Welfare effective June 30. In his letter of resignation, Jones told President Johnson that when he began the job in January, 1961, he expected to stay about two years, but challenges in the position kept him there longer. President Johnson acceded with reluctance to Jones' wish to return to private life.

Jones had been considered influential in

HEW policy matters and often had been spokesman for the department and HEW Secretary Anthony J. Celebrezze. There was no advance indication that Jones would leave the department and his resignation came as a surprise.

MEDICAL NEWS IN TENNESSEE

University of Tennessee College of Medicine

A 3.5 million-dollar grant has been awarded to support operation of a clinical research center in the William F. Bowld Hospital. Aside from awards for construction projects, this is the largest grant ever made to the college. It was awarded by the General Clinical Research Centers Branch of the National Institutes of Health of the U. S. Public Health Service. Study will include gout and arthritis, obesity, nephritis in children, and cases of severe shock and deep burns. It will finance research for seven years.

★

Dr. James R. Givens, research fellow in endocrinology at Vanderbilt University School of Medicine for the past two years, has been appointed as assistant director of the Clinical Research Center in the James K. Dobbs Medical Research Institute and as instructor. Dr. Harry L. Davis, associate director of the cardiopulmonary laboratories at Baptist Hospital since 1958, has been appointed as assistant professor of medicine. Dr. Paul Henry Sherman, trainee in surgical cardiology at the University of California, has joined the staff as an assistant professor of surgery, assigned to the Section of Thoracic Surgery. Dr. Bob A. Freeman, assistant professor of microbiology at the University of Chicago since 1954, has been appointed as associate professor of microbiology. Three physicians have been added to the full-time staff of the department of pediatrics: Dr. Samuel E. Pitner, chief resident in neurology at City of Memphis Hospitals, as assistant professor of pediatrics and neurology; Dr. Aram S. Hanissian, of the American University of Beirut, Lebanon, as instructor; and Dr. Ethel A. Harrell as instructor in pediatrics.

Dr. Dorothy L. Williams, resident in medicine, has received a $2,400 residency training grant from the Southern Medical Association. Dr. Williams is doing research in the composition of cells and working in the section of endocrinology, a study involving such endocrine glands as the pituitary and thyroid.

★

Dr. Kenneth J. Monty, head of the department of biochemistry, has been awarded a $35,000 grant from the American Cancer Society for a two-year study concerning possible errors in the control system of a cell which may cause it to be cancerous.

Vanderbilt University School of Medicine

Some of the University's best known medical alumni participated in a two-day scientific program which highlighted the school's alumni reunion, June 5-6. Guest speakers included: Dr. C. Sidney Burwell, who taught at Vanderbilt in 1925-35, later became dean of the medical faculty at Harvard and is now Samuel A. Levine Professor of Medicine Emeritus at Harvard. Dr. Alfred Blalock, Vanderbilt's first chief resident in surgery, a former member of the faculty, developer of the famous "blue baby" operation and now chairman of the department of surgery at Johns Hopkins. Dr. Chester M. Jones, a former Vanderbilt faculty member, now clinical professor of medicine emeritus and consultant to the dean at Harvard. Dr. Richard W. Blumberg, a member of the pediatric house staff at Vanderbilt in 1939-42, now chairman of the department of pediatrics at Emory University. Dr. Harwell Wilson, who received his M.D. degree from Vanderbilt in 1932 and is now chairman of the department of surgery at the University of Tennessee. Dr. E. Hugh Luckey, who received his M.D. degree from Vanderbilt in 1944 and is now chairman of the department of medicine at Cornell University. Dr. Tinsley R. Harrison, a former member of the faculty at Vanderbilt School of Medicine, now professor of medicine emeritus at the University of Alabama.

Meharry Medical College

Dr. Joseph F. Volker and Dr. William J.

Simmons delivered the principal addresses at Meharry Medical College's 89th commencement exercises June 14-15. Dr. Volker, vice president of health affairs at the University of Alabama, delivered the commencement address; and Dr. Simmons, University Minister at Tennessee A & I State University, offered the baccalaureate sermon. Graduates included 62 doctors of medicine, 12 doctors of dental surgery, 3 for diplomas in dental hygiene and 5 for certificates in medical technology.

TVA Approved Residency for Medical Students

The American Medical Association has approved the Tennessee Valley Authority as a residency institution for medical graduates who wish to pursue careers in occupational medicine. AMA approval followed a recent inspection of TVA health activities by the standards committee of the American Academy of Occupational Medicine. It has been announced by the TVA Health Director that a working agreement has been established with the University of Pittsburgh whereby a physician can fulfill residency requirements by spending one year with TVA following two years of graduate study at the university.

Nashville Society for Internal Medicine

Dr. Samuel S. Riven was elected president of the Nashville Society for Internal Medicine at a recent meeting of the Society held at Belle Meade Country Club. Other officers elected were Dr. Harrison J. Shull, vice president; Dr. Thomas F. Paine, secretary-treasurer; Dr. Fred Goldner and Dr. Grant Liddle, members of the council.

Dr. John A. Oates, a member of the society, spoke on "Clinical Pharmacology of the Sympathetic Blocking Drug.

PERSONAL NEWS

Dr. Julian C. Lentz, Maryville, has been elected chief of staff of the Blount Memorial Hospital medical staff. Vice chief of staff is **Dr. J. N. Proffitt** and **Dr. Robert D. Proffitt,** secretary.

Tennessee physicians recently certified by the American Board of Obstetrics and Gynecology: **Dr. Swan B. Burrus,** Nashville; **Dr. Valton C. Harwell, Jr.,** Columbia; **Dr. James T. Holder,** Maryville; **Drs. Russell F. Mading, Sam Polk Patterson, Walter A. Ruch, Jr.,** and **Henry Wurzburg,** Memphis; **Dr. Francis J. Smiley,** Chattanooga.

Dr. J. A. Butler, Ripley, was a recent guest speaker at a meeting of the Tennessee Licensed Practical Nurses Association—Area 14 in Dyersburg.

Dr. Joe D. Mobley has been elected chief of the Henry County General Hospital medical staff. **Dr. W. G. Rhea** was elected vice chief and serving as secretary for the coming year will be **Dr. J. Ray Smith.**

Dr. Sidney S. Whitaker, Bristol, has been elected president of the East Tennessee Pediatric Association and **Dr. Robert W. Meadows** of Knoxville was chosen vice-president.

Dr. Jerry T. Francisco, Memphis, was a speaker at the annual meeting of the Tennessee Bar Association held in Memphis on June 11-13.

Two Memphis pathologists have been named diplomates of the American Board of Pathology, **Dr. Carolyn F. Blackwell** and **Dr. Warren W. Johnson,** as was **Dr. Michael M. Stump** of Chattanooga.

Dr. Wm. H. Roberts has been elected president of the medical staff of St. Mary's Hospital, Humboldt. Other officers are **Dr. James D. Rozzell,** vice president, and **Dr. George E. Spangler,** secretary.

Dr. Samuel L. Raines, head of the Department of Urology at the UT College of Medicine, has been awarded an honorary doctor of science degree from Washington and Lee University of Lexington, Virginia.

Dr. Stanfield Rogers, research director of University Hospital, Knoxville, has been named head of a section of the co-carcinogensis program in the biology division at Oak Ridge National Laboratory.

Dr. L. M. Graves, Memphis, chairman of the board of directors of Harding College of Searcy, Arkansas, spoke at the college's 1964 commencement on May 28th.

Dr. James A. Burdette, Knoxville, is the new president of the Tennessee Valley Academy of General Practice. Other officers are **Dr. Harry K. Ogden,** Fountain City, vice president and **Dr. Walter C. Beahm,** Knoxville, secretary-treasurer.

Dr. R. H. Kampmeier, TMA President, addressed the Nashville Rotary Club on June 8, on "Current Problems in Medical Education."

Dr. Andrew S. Wachtel, director of the Oak Ridge Mental Health Center since 1961, has been appointed superintendent of Eastern State Hospital.

Dr. R. C. Kimbrough, Madisonville, received a certificate of appreciation for more than half a century of service to Monroe County and East Tennessee at the graduation exercises of Hiwassee College on May 31st.

ANNOUNCEMENTS

Calendar of Meetings, 1964

State

Sept. 28-29—Tennessee Valley Medical Assembly, Tivoli Theatre, Chattanooga

Nov. 4-6 —Annual Assembly of Tennessee Academy of General Practice, Gatlinburg Auditorium

Nov. 6 —East Tennessee Heart Association in conjunction with TAAGP, Gatlinburg

Regional

Aug. 20-22—West Virginia State Medical Association, Greenbrier Hotel, White Sulphur Springs

Sept. 16-19—Colorado Medical Society, Broadmoor Hotel, Colorado Springs

Sept. 29-
Oct. 1 —Kentucky State Medical Association, Kentucky Hotel, Louisville

Oct. 11-14 —Medical Society of Virginia, Golden Triangle Hotel, Norfolk

Oct. 13-15 —Indiana State Medical Association, Murst Temple, Indianapolis

Nov. 16-18 —Medical Society of District of Columbia, Statler-Hilton Hotel, Washington, D. C.

Nov. 16-19 —Southern Medical Association 58th Annual Meeting, Memphis

National

Aug. 24-27 —American Hospital Association, Palmer House, Chicago

Sept. 9-12 —International College of Surgeons (North American Federation), Chicago

Sept. 20-23—American Urological Association (Northeastern Section), Pocono Manor Inn, Pocono Manor, Pa.

Sept. 28 —AMA Council on Occupational Health, Rice Hotel, Houston

Oct. 5-9 —American College of Surgeons, Conrad Hilton Hotel, Chicago

Oct. 10-14 —American Society of Anesthesiologists, Americana Hotel, Bal Harbour, Florida

Oct. 11-16 —American Society of Plastic and Reconstructive Surgeons, Fairmont Hotel, San Francisco

Oct. 15-21 —Association of American Medical Colleges, Denver Hilton Hotel, Denver

Oct. 16-24 —American Society of Clinical Pathologists, Americana Hotel, Bal Harbour, Florida

Oct. 18-23 —American Academy of Ophthalmology and Otolaryngology, Palmer House, Chicago

Oct. 28-30 —American Cancer Society, Biltmore Hotel, New York

Nov. 28-29—American College of Chest Physicians (Interim Meeting), Fontainebleau Hotel, Miami Beach, Fla.

Nov. 29-
Dec. 2 —American Medical Association (Clinical Meeting), Auditorium Exposition Hall, Miami Beach, Fla. and Americana Hotel, Bal Harbour, Fla.

Tennessee Pediatric Society

The fall meeting of the Society will be held Sept. 13-15 at Lake Shore Lodge, Chattanooga. Guest speakers will be: J. W. Gerrard, D.M., Professor of Pediatrics, University of Saskatchewan, Canada; Robert S. Stempfel, Jr., M.D., Associate Professor of Pediatrics, Duke University Medical Center, Durham; and Joseph Stokes, Jr., M.D., Professor of Pediatrics, University of Pennsylvania, Children's Hospital, Philadelphia. Additional information may be obtained from W. P. Hardy, M.D., Secretary, Medical Arts Building, Oak Ridge, Tenn.

PLACEMENT SERVICE

The Placement Service of the Tennessee Medical Association is designed to assist doctors and communities. Further information and contacts, to both physicians and communities, is available from the Public Service Office, 112 Louise Avenue, Nashville, Tennessee—telephone 291-4584.

Locations Wanted

ORTHOPEDIC PHYSICIAN, 30 years of age, now in residency, would like to establish associate or solo practice in any Middle or East Tennessee area of 15,000 to 150,000 population. Graduate Tulane School of Medicine. Married. Available immediately. LW-492

◆

GENERAL PRACTITIONER, age 42, graduate of Oklahoma School of Medicine, would like assistant, clinical, industrial or insurance practice in any community in Tennessee. Now in private practice but like to relocate for better educational opportunities. Married. Protestant. Available 30 days notice. LW-493

◆

INTERNIST, Board eligible, 54 years of age, native Tennessean, graduate of University of Tennessee College of Medicine, would like to relocate to Tennessee. Married. Methodist. Prefers industrial, institutional or public health practice. No preference as to size or location. Available immediately. LW-500

◆

INTERNIST, 31 years of age, graduate of the University of Texas Medical Branch, would like associate practice in Tennessee. Prefers West Tennessee, but will consider other sections, 30,000 plus population. Now in residency. Married. Jewish. Available November 1964. LW-519

◆

GENERAL SURGEON, 33 years of age, graduate of the University of Tennessee College of Medicine, would like practice in East Tennessee city of 10,000 plus. Now in general practice with general surgery. Board qualified. Married. Episcopalian. Available upon notice. LW-521

◆

GENERAL PRACTITIONER, 30 years of age, graduate of the University of Tennessee College of Medicine, would like associate practice in city of 4,000 plus, no preference as to location. Native Tennessean. Tennessee license. Married. Methodist. Available July 1964. LW-522

◆

INTERNIST, 28 years of age, graduate of George Washington School of Medicine, would like assistant, associate or clinical practice in East or Middle Tennessee city of 15,000 to 400,000. Native Tennessean. Married. Protestant. Available July 1965. LW-523

◆

SURGEON, general and thoracic, 33 years of age, graduate of the University of Tennessee College of Medicine, now in residency, would like associate, institutional or solo practice in East or Middle Tennessee city of 20,000 plus. Married. Catholic. Available July 1964. LW-525

◆

GENERAL PRACTITIONER, 29 years of age, graduate of University of Tennessee College of Medicine, desires assistant, associate or industrial practice in West Tennessee city of 75,000 plus. Tennessee license. Now in military service. Married. Catholic. Available September 1964. LW-540

◆

GENERAL SURGEON, 32 years of age, graduate of the University of Tennessee College of Medicine, would like assistant, associate, clinical or industrial practice in West Tennessee town of 10,000 plus. Five years residency training. Tennessee license. Board eligible. Married. Jewish. Available immediately. LW-541

Physicians Wanted

PHYSICIAN needed for general practice in small North Tennessee town. Approved for Sears-Roebuck Foundation assistance. No other physician in area. Support of civic, business and government leaders assured. PW-177

◆

REPLACEMENT for retired general practitioner needed in upper East Tennessee community. Survey report available upon request stressing economic status. Office space and housing available. Near large industrial area. PW-185

◆

GENERAL PRACTITIONER needed in East Tennessee town of approximately 1,000, trade area much larger. Hospital located in town. Office space and equipment available. Associate status if desired. PW-192

◆

CLINIC building available for office for general practitioner or internist in Middle Tennessee town of 2,000, trade area approximately 7,000. No other physician in immediate area. Active support of county and town officials assured. Excellent opportunity. Near lake recreational facilities. PW-195

◆

FOR RENT OR LEASE a fully equipped clinic to general practitioner or internist in East Tennessee town of 4,500, to replace physician who left for residency. Excellent opportunity. PW-197

◆

GENERAL PRACTITIONER or GENERAL SURGEON wanted as assistant or associate in large clinic, Middle Tennessee city of over 6,000. Must have high morals, must have residency training. PW-200

◆

FOR LEASE: 1,000 square feet in uptown office building of Middle Tennessee town of 12,500. Fully equipped with X-ray and laboratory; parking area connected; modern, centrally air-conditioned and heated. PW-205

◆

INDUSTRIAL PHYSICIAN, 25-40 years of age, needed by large concern in East Tennessee city of 180,000. Office space and equipment provided. Regular office hours. Will assist in obtaining housing, if desired. Salary and fringe benefits. Excellent position. PW-206

◆

RADIOLOGIST needed for hospital of 100 beds, located in Northwest Tennessee town of 10,000. One year internship and three years residency desired. Lake recreational facilities nearby. Good housing and schools. PW-209

◆

GENERAL PRACTITIONER or INTERNIST needed to assume practice of physician in Northeast Tennessee city of 68,000. Office new and fully equipped; 1,600 sq. ft. consisting of reception room, secretary's office; doctor's office; four examining rooms; fully equipped lab with fulltime licensed lab technician. Staff will remain if desired. Excellent income. Present physician unable to continue practice due to serious illness. Terms will be arranged to accommodate interested physician. PW-210

OFFICERS OF THE TENNESSEE MEDICAL ASSOCIATION, 1964-65

President—R. H. Kampmeier, M.D., B-4211, Vanderbilt Hospital, Nashville
President-Elect—John H. Burkhart, M.D., 3000 North Broadway, Knoxville
Vice-President—George K. Henshall, M.D., Medical Arts Building, Chattanooga
Vice-President—Robert M. Finks, M.D., 2122 West End Avenue, Nashville
Vice-President—Lamb B. Myhr, M.D., Jackson Clinic, Jackson
Secretary—Charles A. Trahern, M.D., 1724 Memorial Drive, Clarksville
Executive Director—Mr. J. E. Ballentine, 112 Louise Avenue, Nashville 37203

BOARD OF TRUSTEES

*John H. Burkhart, M.D., Chairman, (1967) 3000 No. Broadway, Knoxville
*John C. Burch, M.D., Vice Chairman and Treas., (1967) 2112 West End Ave., Nashville
*J. Malcolm Aste, M.D., (1965) 188 South Bellevue, Memphis
Bland W. Cannon, M.D., (1965) 402-B, 20 South Dudley Street, Memphis
*E. L. Caudill, Jr., M.D., (1966) 114 East H Street, Elizabethton
C. D. Hawkes, M.D., (1966) 220 South Claybrook Street, Memphis
G. Baker Hubbard, M.D., (1966) Jackson Clinic, Jackson
Joseph W. Johnson, Jr., M.D., (1965) Interstate Building, Chattanooga
*R. H. Kampmeier, M.D., (1966) Vanderbilt Hospital, Nashville
K. M. Kressenberg, M.D., (1966) 215 Cedar Lane, Pulaski
Chares A. Trahern, M.D., (1965)) 1724 Memorial Drive, Clarksville
(*Executive Committee of the Board of Trustees)

SPEAKER OF THE HOUSE

J. Malcolm Aste, M.D., 188 South Bellevue, Memphis
Vice-Speaker—Tom E. Nesbitt, M.D., 1921 Hayes Street, Nashville

COUNCILORS

First District—J. J. Range, M.D., Memorial Hospital, Johnson City (1966)
Second District—B. M. Overholt, M.D., 717 Cumberland Ave., S.W., Knoxville (1965)
Third District—M. F. Langston, M.D., 103 Palisades, Signal Mountain (1966)
Fourth District—Kenneth L. Haile, M.D., 137 W. Second Street, Cookeville (1965)
Fifth District—John Derryberry, M.D., 844 Union St., Shelbyville (1966)
Sixth District—Harry T. Moore, Jr., M.D., 326 Mid-State Medical Center, Nashville (1965)
Seventh District—Carl C. Gardner, Jr., M.D., 151 Hatcher Lane, Columbia (1966)
Eighth District—O. M. McCallum, M.D., Henderson (1965)
Ninth District—Byron O. Garner, M.D., Hillcrest Dr., Union City (1966)
Tenth District—Francis H. Cole, M.D., Chairman, 188 South Bellevue Boulevard, Memphis (1965)

DELEGATES TO THE AMA

Alvin J. Ingram, M.D., 869 Madison Avenue, Memphis (1965)
Chas. C. Smeltzer, M.D., 521 W. Cumberland Avenue, Knoxville (1966)
Daugh W. Smith, M.D., 1926 Hayes Street, Nashville (1965)
Alternates:
Julian K. Welch, Jr., M.D., Brownsville (1965)
Wm. J. Sheridan, M.D., Medical Arts Building, Chattanooga (1966)
W. O. Vaughan, M.D., 2103 Hayes Street, Nashville (1965)

PRESIDENTS AND SECRETARIES OF COUNTY MEDICAL SOCIETIES, 1964-65

COUNTY	PRESIDENTS	SECRETARIES
Bedford County	Henry Feldhaus, Jr., M.D., 484 Union St., Shelbyville	A. T. Richards, M.D., 208 Madison, Shelbyville
Benton-Humphreys County	Arthur W. Walker, M.D., Waverly	Hiram C. Capps, M.D., Waverly
Blount County	H. T. Vandergriff, M.D., Med. Arts Bldg., Maryville	O. L. Simpson, M.D., Center Bldg., Maryville
Bradley County	Jas. C. Lowe, M.D., 755 Broad St., N. W., Cleveland	James L. Allen, M.D., 420 Central Ave., N. W., Cleveland
Campbell County	James D. Crutchfield, M.D., 100 E. Ave., Lafollette	Roscoe C. Pryse, M.D., Lafollette
Chattanooga-Hamilton County	Edward T. Newell, Jr., M.D., 707 Walnut St., Chattanooga	C. Robert Clark, M.D., 210 Med. Arts Building, Chattanooga Mrs. Flo Richardson, 109 Med. Arts Bldg., Chattanooga—Executive Secy.
Cocke County	Glen C. Shults, M.D., 501 E. Main St., Newport	R. B. McMahan, M.D., 501 E. Main St., Newport
Coffee County	Ralph Brickell, M.D., 601 N. Atlantic St., Tullahoma	Earl Roles, M.D., Tullahoma
Consolidated Medical Assembly of West Tennessee	Lee Rush, M.D., Somerville	Harold Yarbro, M.D., 700 W. Forest St., Jackson
Cumberland County	R. G. Cravens, M.D., 311 S. Main St., Crossville	Jas. T. Callis, M.D., Crossville
Nashville Academy of Medicine Davidson County	Addison Scoville, M.D., 2104 West End Ave., Nashville	Carl Gessler, M.D., 2760 Lebanon Rd., Nashville, 37214 Mr. Jack Drury, 112 Louise Avenue, Nashville—Executive Secretary
Dickson County	W. A. Bell, M.D., 222 Church St., Dickson	Mary Baxter Cook, M.D., Charlotte
Fentress County	Guy C. Pinckley, M.D., Jamestown	B. F. Allred, M.D., Jamestown
Franklin County	E. W. Kirby-Smith, M.D., Sewanee	George L. Smith, M.D., Winchester
Giles County	K. M. Kressenberg, M.D., 215 Cedar Lane, Pulaski	W. H. Murrey, M.D., 215 Cedar Lane, Pulaski
Greene County	J. R. McKinney, M.D., Takoma Hos., Greeneville	John Lay, M.D., 222 N. Main St., Greeneville
Hamblen County	Luke Nabers, M.D., Morristown	E. Richard Baker, M.D., White Pine
Hawkins County	C. C. Johnson, M.D., 50 N. Church St., Rogersville	W. A. Phillips, M.D., Citizens Union Bank Bldg., Rogersville
Henry County	Richard G. Fish, M.D., Commercial Bank, Bldg., Paris	J. D. Mobley, M.D., E. Wood Clinic, Paris
Hickman-Perry County	Sam O. Jones, M.D., Centerville	Parker D. Elrod, M.D., Centerville
Jackson County	E. M. Dudney, M.D., Gainesboro	J. S. Johnson, M.D., Gainesboro
Knoxville Academy of Medicine	John H. Burkhart, M.D., 3000 Broadway, N. E., Knoxville	Ray J. Leffler, M.D., East Tenn. Baptist Hospital, Knoxville
Lawrence County	W. O. Crowder, Jr., M.D., 233 E. Gaines St., Lawrenceburg	James C. Hudgins, M.D., 200 S. Military, Lawrenceburg
Lincoln County	C. Doyne Toone, M.D., South Elk Avenue, Fayetteville	Anne U. Bolner, M.D., Lincoln County Health Dept., Fayetteville
Macon County	Jack C. Clark, M.D., Lafayette	C. C. Chitwood, Jr., M.D., Lafayette
Marshall County	W. S. Poarch, M.D., Lewisburg	H. C. Harris, M.D., Church St., Lewisburg
Maury County	Leon Ward, M.D., 400 W. 7th St., Columbia	Lawrence Nickell, M.D., Maury County Hospital, Columbia
McMinn County	R. Danny Hays, M.D., 7 Grove, N. W., Athens	Robert G. Hewgley, M.D., Med. Arts Bldg., Box 352, Athens
Memphis-Shelby County	William T. Satterfield, Sr., M.D., 1188 Minna, Memphis, 38104	J. Warren Kyle, M.D., 1079 Madison Ave., Memphis, 38104 Mr. Les Adams, 774 Adams Avenue, Memphis—Executive Secretary
Monroe County	Joe K. Wallace, M.D., Sweetwater	Joe Henshaw, M.D., 404 N. High St., Sweetwater
Montgomery County	Howard R. Kennedy, M.D., 419 Franklin St., Clarksville	Frank J. Malone, Jr., M.D., 408 Franklin St., Clarksville
Northwest Tennessee Academy of Medicine	J. H. Ragsdale, M.D., Ripley	Art Murphy, M.D., Trimble
Overton County	W. G. Quarles, M.D., Livingston	Jack M. Roe, M.D., Livingston
Putnam County	Claude M. Williams, M.D., General Hospital, Cookeville	Thurman Shipley, M.D., 135 W. 2nd St., Cookeville
Roane-Anderson County	Albert J. Ahler, M.D., 202 Carter St., Harriman	Robert DePersio, M.D., Med. Arts Bldg., Oak Ridge
Robertson County	Warren G. Hayes, M.D., Bell Bldg., Springfield	Sue C. Atwood, M.D., 500 Main, Springfield
Rutherford County	Lois Kennedy, M.D., 104 S. Spring St., Murfreesboro	Radford Smith, M.D., 420 N. University St., Murfreesboro
Scott County	Maxwell Huff, M.D., Oneida	Roy L. McDonald, M.D., Oneida
Sevier County	Charles L. Roach, M.D., Sevierville	Charles E. Waldrup, M.D., Gatlinburg
Smith County	Thayer S. Wilson, M.D., Carthage	David G. Petty, M.D., Carthage
Sullivan-Johnson County	F. G. McConnell, M.D., 142 Cherokee St., Kingsport	Robert E. Keith, M.D., Med. Dept., Tenn. Eastman Co., Kingsport
Sumner County	W. Gordon Doss, M.D., Hendersonville	Kermit E. Jones, M.D., Westmoreland
Tipton County	Travis L. Bolton, M.D., 728 E. Sherrod, Covington	Warren A. Alexander, M.D., W. Pleasant Avenue, Covington
Warren County	J. E. Puckett, M.D., 203 West Main St., McMinnville	J. C. Gaw, M.D., 315 N. Spring St., McMinnville
Washington-Carter-Unicoi County	Dillard M. Sholes, Jr., M.D., 203 N. Sycamore St., Elizabethton	Gilbert A. Rannick, M.D., 107 W. Fairview Ave., Johnson City
Weakley County	Edward Welles, Jr., M.D., Dresden	M. K. Bottorff, M.D., Martin
White County	Donald H. Bradley, M.D., Sparta	Charles A. Mitchell, M.D., Sparta
Williamson County	Joel Lee, M.D., Franklin	H. P. Hoover, M.D., Franklin
Wilson County	Joe Frank Bryant, M.D., McFarland Hospital—Lebanon	T. R. Puryear, M.D., 239 E. Main, Lebanon

in virtually all diarrheas...prompt symptomatic control

LOMOTIL®

TABLETS / LIQUID—Each tablet and each 5 cc. of liquid contains:
diphenoxylate hydrochloride . . . 2.5 mg.
(Warning: May be habit forming)
atropine sulfate . . . . . 0.025 mg.



Lomotil controls the basic physiologic dysfunction in diarrhea—excessive propulsive motility. Pharmacologic evidence indicates that it does so by directly inhibiting propulsive movements of the intestines. This direct, well-localized activity controls diarrheas of widely varied origin and does so promptly, conveniently and economically.

The relatively few conditions in which Lomotil has given less than satisfactory control have been, for the most part, those such as severe ulcerative colitis in which too little anatomic or functional capacity of the intestines remains for the motility-lowering action of Lomotil to have effect.

It should be noted, however, that Lomotil has proved highly useful in mild to moderate ulcerative colitis and in several other refractory forms of diarrhea.

The recommended initial adult dosage is two tablets (2.5 mg. each) three or four times daily, reduced to meet the requirements of each patient as soon as the diarrhea is controlled. Maintenance dosage may be as low as two tablets daily. *Children's* daily dosage (in divided doses) varies from 3 mg. for a child of 3 to 6 months to 10 mg. for one 8 to 12 years of age. Lomotil is an exempt narcotic; its abuse liability is low and comparable to that of codeine. Recommended dosages should not be exceeded. Side effects are relatively uncommon but among those reported are gastrointestinal irritation, sedation, dizziness, cutaneous manifestations, restlessness and insomnia. Lomotil should be used with caution in patients with inpaired liver function and in patients taking addicting drugs or barbiturates. Lomotil is a brand of diphenoxylate hydrochloride with atropine sulfate; the subtherapeutic amount of atropine is added to discourage deliberate overdosage.

Research in the Service of Medicine SEARLE

Hill Crest
SANITARIUM
AND OUTPATIENT CLINIC



MEDICAL DIRECTORS:
James A. Becton, M.D., F.A.P.A.
James K. Ward, M.D., F.A.P.A.

Location: 7000 5th Avenue, South
Box 2896, Woodlawn Station
BIRMINGHAM, ALABAMA 35212
Phone: 595-1151

is a private psychiatric hospital established in 1925 for the treatment of nervous or mental disorders, alcohol or drug addiction problems.
The hospital accepts both men and women. It is departmentalized according to sex and the degree of illness, with different sections for the acutely ill patient, the mildly ill patient, the convalescent patient, and the chronically ill resident patient. All rooms are private.

HILL CREST SANITARIUM *is a member of:*

AMERICAN HOSPITAL ASSOCIATION
AMERICAN PSYCHIATRIC ASSOCIATION
NATIONAL ASSOCIATION OF PRIVATE PSYCHIATRIC HOSPITALS
ALABAMA HOSPITAL ASSOCIATION
BIRMINGHAM REGIONAL HOSPITAL COUNCIL



A SURGICAL INSTRUMENT OIL
Scientifically Developed for the
MEDICAL PROFESSION

Apply as indicated; a few drops especially in locks and serrations of instruments, or other delicate mechanisms. Leave a thin film over the entire instrument to prevent rust in disuse or storage. This highly refined clear instrument oil will not clog, gum or turn rancid. Non-corrosive.

4-oz. can 75c
Pt. bottle with dispensing can $2.50
Qt. bottle with dispensing can $4.00
Plus post.

White Surgical Supply Co.
SURGICAL SUPPLIES & ACCESSORIES
515 West Church Ave. Knoxville 7, Tennessee
Telephone 3-1186

Gyne-Cytology Laboratory, Inc.
M. Wm. Rubenstein, M.D.

(PAPANICOLAOU METHOD)

RAPID SERVICE
Mailing Kits On Request

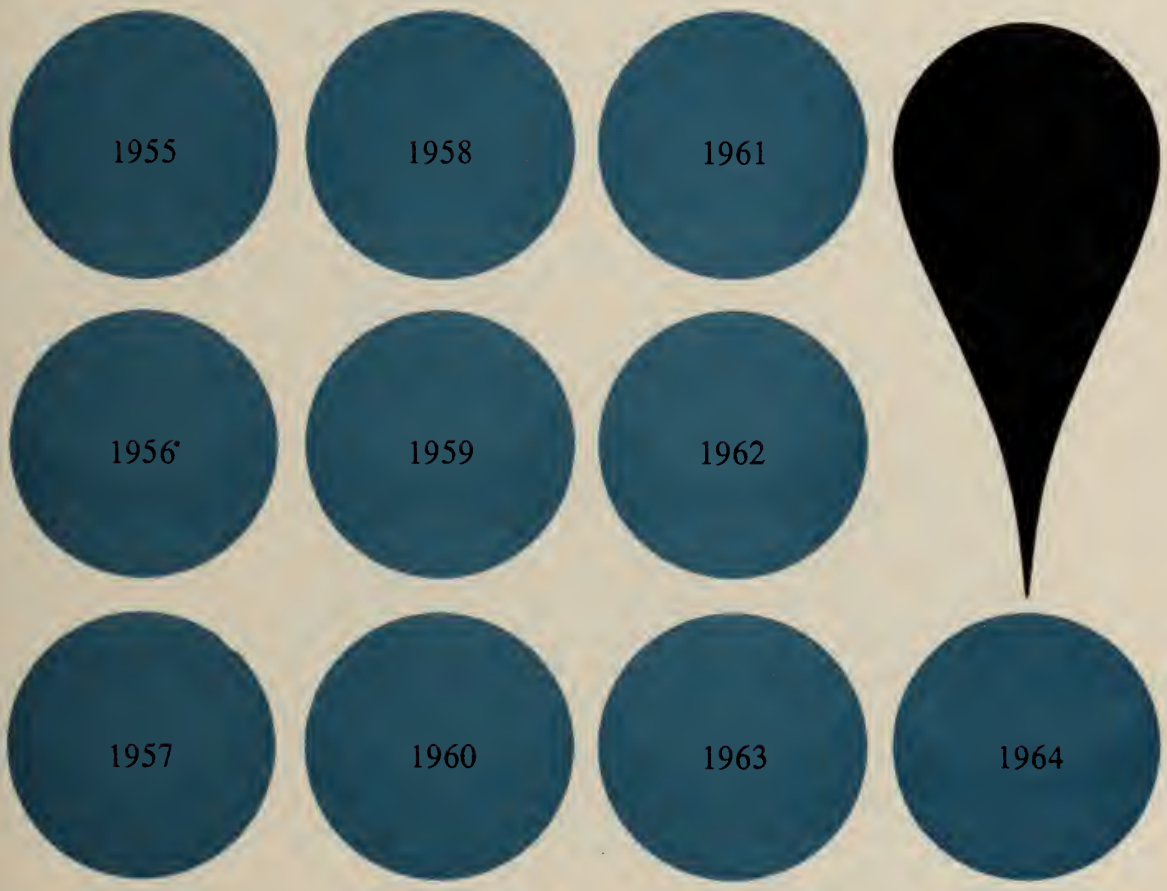
Suite 422 - 636 Church Street
EVANSTON, ILLINOIS 60201

PATRONIZE

OUR

ADVERTISERS

The clear conclusion from 10 years' experience...



belongs in every practice

Miltown®
(meprobamate)

CM-2026

WALLACE LABORATORIES/Cranbury, N. J.

Professional Liability Insurance
(MALPRACTICE)

Policy and Rates Approved
by the
TENNESSEE MEDICAL ASSOCIATION



Standard Coverage That SAVES YOU 35%

Class 1—Physicians doing no surgery

Class 2—Physicians doing minor surgery or assisting in major surgery on own patients

Class 3—Surgeons - General Practitioners who perform major surgery or assist in major surgery on other than their own patients and specialists: Anesthesiologists, Cardiologists (including catheterizations, but not including surgery), Ophthalmologists and Proctologists

Class 4—Surgeons - Specialists

Limits	Class 1	Class 2	Class 3	Class 4
5/15	$ 37.05	$ 46.15	$ 89.05	$133.25
10/30	50.02	62.30	120.22	179.89
25/75	63.36	78.92	152.28	227.86
50/150	70.02	87.22	168.30	251.84
75/225	74.10	92.30	178.10	266.50
100/300	76.32	95.07	183.44	274.50
200/300	79.66	99.22	191.46	286.49
300/300	81.88	101.99	196.80	294.48
200/500	88.77	108.61	202.13	298.49
500/500	93.59	114.61	213.71	315.81
500/1 million	114.70	135.99	236.37	339.81
1 million/1 million	120.25	142.91	249.73	359.79

1. Partnership liability, increase premium for each partner by 20%.
2. X-Ray Therapy and Shock Therapy quotations made on request.
3. Premises Liability (bodily injury, property damage and medical payments) Minimum premium $8.00.

FARRINGER & CO.
Phone 524-7335
Knoxville, Tennessee

FARRINGER & CO.
Phone 276-7331
Memphis, Tennessee

FAW & SHERROD
Phone 926-8164
Johnson City, Tennessee

INGLE-KNOX INSURANCE AGENCY
Phone 265-4541
Chattanooga, Tennessee

LIPSCOMB & PITTS CO.
Phone 272-2515
Memphis, Tennessee

Your policy backed by Assets over **$42,000,000.00**

Shelby Mutual Insurance Company
of Shelby, Ohio

*20% off on Hospital—Professional Liability

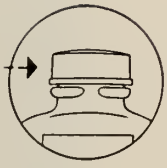
For Information on Hospital-Professional Liability and other coverages, please contact one of the agents listed.

HOW TO WIN FRIENDS...

little



New
Orange Flavored
Bayer Aspirin for Children
is sweet
all the way through,
so children
take it readily.
The GRIP-TIGHT CAP ----------→
on the bottle
helps keep them
from taking it
on their own.



Bottles of 50 tablets
(1¼ grains each)

NOW!
NEW ORANGE FLAVOR!

We will be pleased to send
professional samples on request.

THE BAYER COMPANY
Division of Sterling Drug Inc. Dept. 11
1450 Broadway, New York 18, N.Y.



YOU:

HISTORY: 20 years of study, plus internship/residency. Substantial investment in professional location, equipment. **SIGNS and SYMPTOMS**: Reports that large home, growing family and minimal professional standard of living are a concern. Still ahead—college costs, retirement, natural estate ambitions. **PROGNOSIS**: Needs 15-20 peak years of income to pay off education, home; rear family; retire. All this while battling tough taxes, and without the benefit of social security or company paid life and disability insurance, pension plan. **TREATMENT**: Learn about Mutual Benefit Life's "Seven Significant Benefits". Talk with a M.B.L. representative. See how a built-for-you plan solves specific problems through unique disability clauses, unusually high cash and loan values, liberal survivor income options—and more. Write on your own professional letterhead for exclusive report covering a full range of typical insurance requirements for physicians. Just ask for a copy of *Consultant's Report*.

Those who plan ahead get ahead **MUTUAL BENEFIT LIFE** INSURANCE COMPANY, NEWARK, NEW JERSEY

CARRIER OF YOUR TENNESSEE MEDICAL ASSOCIATION GROUP LIFE INSURANCE PLAN

EDWARD C. DUNN
1104 Sudekum Bldg.
Nashville, Tenn.

SETH W. SIZER
1211 James Bldg.
Chattanooga, Tenn.

THERON M. LEMLY
1309 Poplar Ave.
Memphis, Tenn.

SAINT ALBANS

PSYCHIATRIC HOSPITAL

(A Non-Profit Organization)

Radford, Virginia

Telephone: 639-2482

STAFF

James P. King, M.D., Director

William D. Keck, M.D.
Clinical Director
James K. Morrow, M.D.
Silas R. Beatty, M.D.

Edward W. Gamble, III, M.D.
Morgan E. Scott, M.D.
J. William Giesen, M.D.
Internist (Consultant)

Clinical Psychology
Thomas C. Camp, Ph.D.
Artie L. Sturgeon, Ph.D.

Don Phillips
Administrator

AFFILIATED CLINICS

Bluefield Mental Health Center
525 Bland St., Bluefield, W. Va.
David M. Wayne, M.D.
Phone: 325-9159

Beckley Mental Health Center
109 E. Main Street, Beckley, W. Va.
W. E. Wilkinson, M.D.
Phone: 253-8397

Charleston Mental Health Center
1119 Virginia St., E., Charleston, W. Va.
Malcolm G. MacAulay, M.D.
Phone: 344-3578

Norton Mental Health Clinic
Norton Community Hospital, Norton, Va.
Pierce D. Nelson, M.D.
Phone: 1090

Nashville Surgical Supply Company

The Physician and Hospital's Complete Supply & Service Source

Physicians equipment and supplies

Hospital equipment and supplies

Laboratory equipment and supplies

THE MOST COMPLETE DRUG AND BIOLOGICAL SUPPLY SOURCE IN TENNESSEE

Distributor for Standard and Mattern X-Ray Equipment and Supplies

24-Hour Emergency Service

Nashville Surgical Supply Co., Incorporated

1911 Church St.

Nashville, Tennessee

Phone AL 5-4601

Physicians Wanted

PSYCHIATRISTS OR GENERAL PRACTITIONERS interested in psychiatry. Veterans Administration Hospital, Tuscaloosa, Alabama. Salaries to $18,240 based on training and experience. Liberal retirement plan, 30 days vacation with pay, 15 days sick leave per year, health and life insurance programs. Opportunity for physicians interested in regular hours with less demanding duties than private practice. Write James C. Folsom, M.D., Chief of Staff, VA Hospital, Tuscaloosa, Alabama.

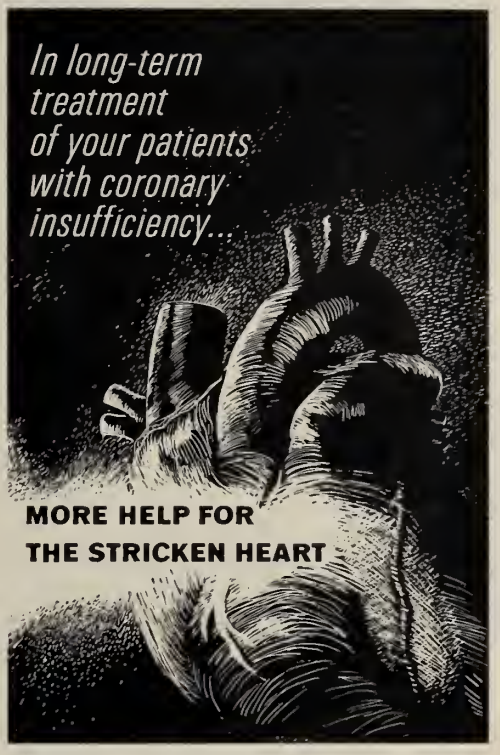
Today's Health
PUBLISHED BY THE American Medical Association
FOR THE AMERICAN FAMILY

A Good Buy in Public Relations

★ Place it in your reception room

Today's Health is published for the American Family by the American Medical Association, 535 N. Dearborn St.—Chicago 10, Illinois

Give your subscription order to a member of your local Medical Society Woman's Auxiliary, who can give you Special Reduced Rates.



- PETN (pentaerythritol tetranitrate) to increase oxygen supply
- plus meprobamate to decrease anxiety and tension

Unlike phenobarbital, meprobamate is *not* cumulative and does *not* cause depression.

Side effects: Pentaerythritol tetranitrate may infrequently cause nausea and mild headache, usually transient. Slight drowsiness may occur with meprobamate and, rarely, allergic reactions. **Precautions:** Meprobamate may increase effects of excessive alcohol. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction. **Contraindications:** Like all nitrate-containing drugs, 'Miltrate' should be given with caution in glaucoma. *Complete product information available in the product package, and to physicians upon request.* **Dosage:** 1 to 2 tablets, *before meals* and at bedtime. Individualization required. **Supplied:** Bottles of 50 tablets.

CML-1055

MILTRATE®
meprobamate 200 mg.+ pentaerythritol tetranitrate 10 mg.

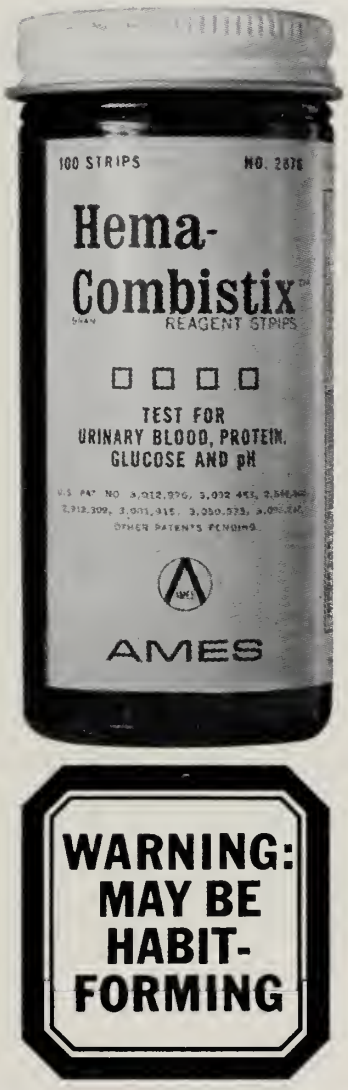
WALLACE LABORATORIES / *Cranbury, N. J.*



Whether you're a teacher correcting exams. A student cramming for them. A housewife cleaning up after the kids. Or a businessman working late at night. Whoever you are, things go better when you pause and refresh with ice-cold Coca-Cola.

List of Advertisers in This Issue

American Cyanamid Company	XI, XVI, XXII, XXIII	McQuiddy Printing Co.	XVII
Ames Co., Inc.	XXXVI	Mutual Benefit Life Ins. Co.	XXXII
Appalachian Hall	XX	Nashville Surgical Supply Co., Inc.	XXXIV
Baker Laboratories	XIII	Parke-Davis and Company	II
Blood Bank Foundation	XXIV	Physicians Wanted	XXXV
Brayten Pharmaceutical Co.	XIX	Robins, A. H. Co.	III, XV
Burroughs Wellcome & Co.	XIV, XVIII	Roche Laboratories	XXXVIII
Coca-Cola	XXXVI	St. Albans	XXXIII
Farringer & Company	XXX	Searle, G. D. & Co.	XXVII
Geigy Pharmaceutical	VIII	Smith, Kline & French Laboratories	XII
Glenbrook Laboratories	XXXI	Smih, Reed, Thompson & Ellis Co.	IX
Guild Opticians	XX	Tafel Surgical Supply Co., Inc.	XVII
Gyne-Cytology Laboratory, Inc.	XXVIII	Tennessee Valley Medical Assembly	XXV
Hill Crest Sanitarium	XXVIII	Today's Health	XXXV
Kay Surgical, Inc.	XXIV	Wallace Laboratories	VI, VII, X, XXI, XXIX, XXXV
Lilly, Eli and Co.	I, XXVI	White Surgical Supply Co.	XXVIII
Massengill Agency	XVII	Winthrop Laboratories	V



Once you have used **HEMA-COMBISTIX,**™ dip-and-read test for urinary blood, protein, glucose, and pH, it may become a habit to test every patient's urine routinely with this simple, convenient reagent strip. Most of the answers will be "negatives," but an unexpected "positive" may alert you to serious pathology even before related symptoms appear. The test takes only 60 seconds. As basic as the stethoscope...**HEMA-COMBISTIX** is a *good* habit to form. □ Ames Company, Inc., Elkhart, Indiana. 68764

AMES
AMES



for
The Age of
Anxiety

In prescribing: Dosage—Adults: Mild to moderate anx
and tension, 5 or 10 mg t.i.d. or q.i.d.; severe states, 2(
25 mg t.i.d. or q.i.d. Geriatric patients: 5 mg b.i.d. to q
Cautions—Occasional side effects, often dose-related,
drowsiness, ataxia, minor skin rashes, menstrual irregu
ities, nausea and constipation. Paradoxical reactions
occasionally occur in psychiatric patients. Individual mai
nance dosages should be determined. Advise patients aga
possibly hazardous procedures until maintenance dosag
established. Though compatible with most drugs, use car
combining with other psychotropics, particularly MAO inh
tors or phenothiazines; warn patients of possible combi
effects with alcohol. Observe usual precautions in impa
renal or hepatic function, and in long-term treatment.
Supplied—Capsules, 5 mg, 10 mg and 25 mg, bottle
50 and 500.

LIBRIUM®
(chlordiazepoxide HCl)

Roche Laboratories, Division of Hoffmann-La Roche
Nutley, N.J. 07110

THE JOURNAL OF THE TENNESSEE MEDICAL ASSOCIATION

LIBRARY OF THE RHODE ISLAND

12TH ANNUAL TENNESSEE VALLEY MEDICAL ASSEMBLY SEPTEMBER 28-29, 1964 TIVOLI THEATER, CHATTANOOGA, TENNESSEE

AUGUST, 1964

Volume 57 Number 8

of Contents on Page IV

to Advertisers on XXXVI

AMYTAL TAKES THE EDGE OFF DAYTIME ANXIETY AND TENSION

Amytal is a moderately long-acting barbiturate that takes the edge off daytime anxiety and tension without significant change in mood and attitude. Since Amytal is metabolized in the liver within twenty-eight hours, overlapping of effect is minimized, and renal damage does not constitute a contraindication.

Side-Effects: Idiosyncrasy or allergic reactions to the barbiturates may occur.

Precautions and Contraindications: Amytal should be used with caution in patients with decreased liver function, since a prolongation of effect may occur. Administration in the presence of uncontrolled pain may produce excitement. WARNING—May be habit-forming.

Dosage: Doses should be individualized for each patient. The usual adult sedative dosage ranges from 30 mg. (1/2 grain) to 50 mg. (3/4 grain) two or three times daily.

Additional information available upon request. Eli Lilly and Company, Indianapolis 6, Indiana.

AMYTAL® AMOBARBITAL

Lilly

400152



pollens in the grass...alas

Kapseals®
Benadryl®
(diphenhydramine hydrochloride)

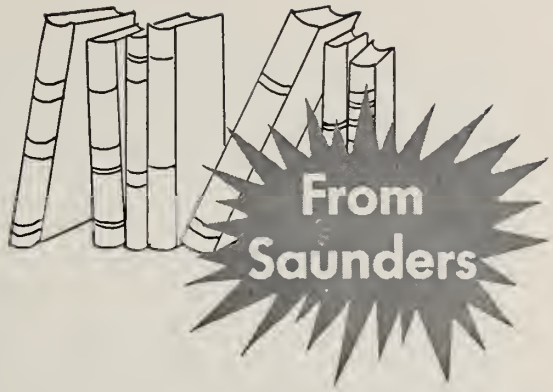
FOR EFFECTIVE CONTROL OF ALLERGIC SYMPTOMS—*Antihistaminic action* relieves nasal congestion, sneezing, lacrimation, and pruritus. *Antispasmodic action* relieves bronchial spasm. **Precautions:** Persons who have become drowsy on this or other antihistamine-containing drugs, or whose tolerance is not known, should not drive vehicles or engage in other activities requiring keen response while using this product. Hypnotics, sedatives, or tranquilizers, if used with BENADRYL (diphenhydramine hydrochloride), should be prescribed with caution because of possible additive effect. Diphenhydramine has an atropine-like action which should be considered when prescribing BENADRYL (diphenhydramine hydrochloride). BENADRYL (diphenhydramine hydrochloride) is supplied in several forms including Kapseals containing 50 mg. 39864

PARKE-DAVIS
PARKE, DAVIS & COMPANY, Detroit, Michigan 48232

New—Moore's *Give and Take*

The development of tissue transplantation

This is the fascinating story of "new tissues for old"—its relatively brief but eventful history, the present status of the "art," and the promise of the future. Dr. Moore carries you along the devious trail of transplantation progress where you'll follow developments in autografts, homografts and heterografts—observe the intricacies involved in probing antigens, antibodies and immunity—learn of the early organ grafts with no suppression of immune reaction, then of the era of whole body irradiation and its eventual abandonment, and finally of today's successes with immuno-suppressant drugs. The heart of the text deals with the important events and patients in the 250-odd kidney transplants performed in the last decade. Five detailed and exciting case histories delineate turning points in transplantation progress. Intriguing topics, comments and anecdotes crowd the pages of this fascinating book. You'll find such subjects as: *the recognition by the immune system of its own proteins as harmless—the mechanism of immunologic memory—a tale of blood chimerism—the dilemma of tissue and organ donation, both ethical and legal.* Dr. Moore concludes with a succinct discussion of where transplantation is warranted or needed.



By Francis D. Moore, M.D., Mosely Professor of Surgery, Harvard Medical School; Surgeon-in-Chief, Peter Bent Brigham Hospital, Boston, Massachusetts. 182 pages, 5½" x 8½", illustrated. About $6.00. *New—Just Ready!*

New (8th) Edition—Nelson's *Textbook of Pediatrics*

Gives you an effective answer for every pediatric problem

Dr. Nelson and 81 eminent contributors cover the entire field of pediatrics in this *New (8th) Edition.* They discuss every aspect of child care, from the prenatal period through adolescence. They tell you how to keep the well child healthy, as well as how to diagnose and treat the myriad diseases of infancy and childhood. Disorders and malformations of each body system are covered in detail. All the childhood diseases are explicitly described, with authoritative discussions of etiology, epidemiology, pathogenesis, immunity, clinical manifestations, diagnosis, prognosis, prevention and treatment. This up-to-date revision is studded with newly developed diagnostic procedures, as well as both new and standard methods of prevention and treatment. You'll find information on *the problems involved in the battered-child syndrome—on newly discovered inborn errors of metabolism—on new theories of psychologic development.* Many chapters and sections are entirely new—*Pseudomonas and Other Gram-Negative Bacilli—Anonymous Mycobacterial Infections—Intestinal Malabsorption—Waardenburg's Syndrome—Interstitial Pulmonary Fibrosis.* Others are so extensively revised as to constitute virtually new material. Here is a book useful to any physician who ever treats infants or children.

Edited by Waldo E. Nelson, M.D., D.Sc., Professor of Pediatrics, Temple University School of Medicine; Medical Director of St. Christopher's Hospital for Children. With 81 distinguished contributors. About 1640 pages, 7" x 10", with 471 figures. About $18.00. *New (8th) Edition—Just Ready!*

New—Elliott's *Clinical Neurology*

Gives specific help on neurologic diagnosis and treatment

Here is a concise new work seasoned with clinical insight. The author skillfully presents crisp accounts of individual neurological diseases (both common and uncommon) plus principles and practice involved in neurological diagnosis. He provides pertinent anatomical, physiological, and neurochemical background material, focusing on practical application. Important diagnostic features of each disease discussed are stressed and the diagnostic significance of individual symptoms and signs are clearly spelled out. Among the many features of this new text you'll find: Helpful information on differential diagnosis of diseases exhibiting such common symptoms as *headache, pain in the face, sciatica, vertigo, coma, seizures, peripheral neuritis, etc.*—Specific treatment outlined in detail—Acute and chronic organic psychoses analysed in terms of neurophysiology. New material brings you up-to-the-minute on: *the reciprocal relationship between brain function and serum electrolytes—the effects of brain lesions on the electrocardiogram—the use of echoencephalography and brain-scanning in diagnosis.* Any physician desiring latest help in diagnosis and treatment of neurological diseases will find *Clinical Neurology* eminently useful.

By Frank A. Elliott, M.D., F.R.C.P., Chief of Neurology, The Pennsylvania Hospital; Professor of Clinical Neurology, University of Pennsylvania School of Medicine. About 672 pages, 6⅜" x 9¼", with about 179 illustrations. About $12.00. *New—Just Ready!*

W. B. SAUNDERS COMPANY West Washington Square, Phila., Pa. 19105

Please send and bill me:

☐ Moore—*Give and Take*_____About $ 6.00

☐ Nelson—*Pediatrics*_____About $18.00

☐ Easy Pay Plan ($5 per mo.)

☐ Elliott—*Clinical Neurology*_____About $12.00

Name_____

Address_____ SJG 8-64

The Journal of the TENNESSEE MEDICAL ASSOCIATION

Published Monthly

By Tennessee Medical Association

OFFICE OF PUBLICATION, 112 LOUISE AVENUE, NASHVILLE, TENNESSEE 37203

Second Class Postage Paid at Nashville, Tennessee

Volume 57
No. 8

AUGUST, 1964

Per Year, $5.00
Single Copy, 50 Cents

Published Monthly

Contents

The Surgical Treatment of Acute Frontal Sinusitis, M. E. Glasscock, III, M.D., Memphis, Tenn. 323

Pulseless Disease, Thomas R. Harris, M.D., and Charles B. McCall, M.D., Memphis, Tenn. 327

Case Report
Unilateral Hyperlucent Lung with Associated Myocardial Disease, John Thomas, M.D., Asghar Davachi, M.D., Edwin Mitchell, M.D., Nashville, Tenn. 330

Staff Conference 334

Clinicopathologic Conference 337

President's Letter 345

Editorial 347

Programs and News of Medical Societies 349

Deaths 350

National News 351

Medical News in Tennessee 352

Personal News 353

Announcements 355

Placement Service 356

Instructions to Contributors

Manuscripts submitted for consideration for publication in the Journal of the Tennessee Medical Association should be addressed to the Editor, Dr. R. H. Kampmeier, Vanderbilt University Hospital, Nashville 12, Tennessee.

Manuscripts must be typewritten on one side of letter-weight paper. Either double or triple spacing and wide margins must be provided to facilitate editing which will be legible for the printer.

Bibliographic references should not exceed ten or twelve in number documenting key publications. They should appear at the end of the paper. The bibliographic references must conform to the style used in the American Medical Association publications, as,—Alais, F. G.: What Is Known About It, J. Tennessee M. A., 35:132, 1950.

Illustrations must be mounted on white cardboard and be numbered. The editor will determine the number, if any, of illustrations to be used. Additional illustrations will be charged to the author. The author's name should appear on the back of each illustration.

If reprints are desired, the requested number should be indicated in the letter accompanying the manuscript. The author will be billed by the publisher.

DEVOTED TO THE INTERESTS OF THE MEDICAL PROFESSION OF TENNESSEE

R. H. KAMPMEIER, M.D., Editor

This Association Does Not Officially Indorse Opinions Presented in Different Papers Published herein

Copyright, 1964, by the Tennessee Medical Journal



NTz Nasal Spray gives prompt, dependable decongestion of the nasal membranes for fast symptomatic relief of hay fever. The first spray shrinks the turbinates, restores nasal ventilation and stops mouth breathing. The second spray, a few minutes later, improves sinus ventilation and drainage. Excessive rhinorrhea is reduced.

NTz Nasal Spray also provides decongestive relief for head colds, perennial rhinitis and sinusitis. Supplied in leakproof, pocket-size, squeeze bottles of 20 ml. and in bottles of 30 ml. with dropper.

NTz® Nasal Spray

NTz is more than a simple vasoconstrictor. It contains Neo-Synephrine® HCl 0.5%—the efficacy of which is unexcelled—to shrink nasal membranes and provide inner space; Thenfadil® HCl 0.1% for topical antiallergic action; and Zephiran® Cl 1:5000 (antibacterial wetting agent) to promote the spread of the decongestant components to less accessible nasal areas.

NTz is well tolerated and does not harm respiratory tissues.

NTz, Neo-Synephrine (brand of phenylephrine), Thenfadil (brand of thenyldiamine) and Zephiran (brand of benzalkonium as chloride, refined), trademarks reg. U.S. Pat. Off. 1796M

Winthrop Laboratories
New York 18, N.Y.


just
turned
hypertensive

a 15 mm. Hg. drop in diastolic pressure would also suit her very well

for suitably gradual, physiologic hypotensive treatment

HYDROMOX®

QUINETHAZONE·TABLETS

antihypertensive diuretic

HYDROMOX Quinéthazone is excellent for use in early hypertension. Extremely well tolerated, the average reported reduction in diastolic pressure is 15 mm. Hg.,[1,2] just right for patients with mild to moderate diastolic elevations. Systolic pressure lowered accordingly. A convenient, single daily dose of one to two 50 mg. tablets is usually sufficient.

INDICATED in hypertension with or without edema, and in all types of edema involving salt retention. May be helpful in some cases of lymphedema, idiopathic edema and edema due to venous obstruction.

SIDE EFFECTS: Skin rash (rare), gastrointestinal disturbances, weakness and dizziness, seldom so severe that drug should be stopped. Generally, the adverse effects sometimes associated with the thiazide diuretics are possible. Pre-existing electrolyte abnormalities may be aggravated.

CONTRAINDICATION: Anuria.



1. Steigmann, F., and Griffin, R.: Evaluation of Quinethazone, a New Diuretic. *J. Amer. Geriat. Soc.* 11:945 (Oct.) 1963.
2. Schwartz, M.: Office Evaluation of a New Diuretic in Patients with Hypertensive Diseases. Scientific Exhibit Presented at the Clinical Meeting of the American Medical Association, Los Angeles, California, Nov. 25-28, 1962.

Lederle

LEDERLE LABORATORIES,
A Division of AMERICAN CYANAMID COMPANY,
Pearl River, New York

6278-4

TENNESSEE VALLEY MEDICAL ASSEMBLY

(Sponsored by the Chattanooga and Hamilton County Medical Society)

TIVOLI THEATER, CHATTANOOGA, TENNESSEE

Monday, September 28, and Tuesday, September 29, 1964

12TH ANNUAL ASSEMBLY

A.M.

7:30 REGISTRATION BEGINS — MONDAY, SEPTEMBER 28, 1964

9:00 PHILIP THOREK, M.D., Prof. Surg., Cook County Graduate School of Medicine, Chicago, Ill., *"Gastrointestinal Bleeding—Diagnosis and Treatment."*

9:30 JOSEPH H. HOLMES, M.D., Prof. of Medicine, University of Colorado, Denver, Colorado, *"Treatment of Chronic Renal Disease and Renal Transplant."*

10:00-10:30 A.M.—INTERMISSION

10:30 THOMAS J. KIRBY, M.D., Cons. in Ophthalmology, Mayo Clinic, Rochester, Minn., *"External Disease of the Eye."*

11:00 GORDON MCHARDY, M.D., Clin. Prof. of Medicine, Louisiana State University Medical School, New Orleans, La., *"Critical Evaluation of Gastric Hypothermia in the Management of Duodenal Ulcer."*

11:30 JOHN C. WEED, M.D., Prof. Obstetrics and Gynecology, Tulane University, New Orleans, La., *"Management of Pelvic Relaxation In Women."*

NOON

2:00 RICHARD W. VILTER, M.D., Prof. of Medicine, University of Cincinnati College of Medicine, Cincinnati, Ohio, *"Diagnosis and Treatment of Refractory Anemias."*

2:30 FRANK D. LATHROP, M.D., EENT Dept., Lahey Clinic, Boston, Mass., *"Management of Chronic Inflammation of the Salivary Glands."*

3:00-3:30 P.M.—INTERMISSION

3:30 CORNELIUS E. SEDGWICK, M.D., Surgical Staff, Lahey Clinic, Boston, Mass., *"Portal Hypertension."*

4:00 ROBERT L. EGAN, M.D., Asst. Prof. of Radiology, University of Texas Postgraduate School of Medicine, Houston, Texas, *"Mammography in the Diagnosis of Breast Diseases."*

4:30 *Question and Answer Period.*

REGISTRATION FEE $15.00

BANQUET TICKET $7.50

TUESDAY, SEPTEMBER 29, 1964

A.M.

9:00 MURRAY M. COPELAND, M.D., Assoc. Dir., (Education), M. D. Anderson Hospital and Tumor Institute, Houston, Texas, *"The Challenge of the Biologic Aspects of Cancer of the Breast."*

9:30 JAMES G. HUGHES, M.D., Prof. of Pediatrics, University of Tennessee Medical School, Memphis, Tenn., *"The Treatment of the Epileptic Child."*

10:00-10:30 A.M.—INTERMISSION

10:30 ABRAHAM F. LASH, M.D., Prof. of Gynecology, Cook County Hospital, Postgraduate School of Medicine, Chicago, Ill., *"The Incompetent Internal os of the Cervix, A Factor in Second Trimester Abortion."*

11:00 EDGAR F. FINCHER, M.D., Prof. Neurosurgery and Head of Department, Emory University, Atlanta, Ga., *"Chronic Subdural Hematomas."*

11:30 JOHN H. GIBBON, JR., M.D., Samuel D. Gross Prof. of Surgery and Head of Department of Surgery, Jefferson Medical College, Philadelphia, Pa., *"Changing Concepts in the Therapy of Cancer of the Esophagus."*

NOON

2:00 EMERSON DAY, M.D., Medical Division, Strang Clinic, New York, N. Y., *"Cancer Check-up In Private Practice."*

2:30 WILLIAM B. KANNEL, M.D., Associate Director, Department of Health Education and Welfare, Framingham, Mass., *"Factors in the Development of Clinical Atherosclerotic Disease."*

3:00-3:30 P.M.—INTERMISSION

3:30 DONALD J. BIRMINGHAM, M.D., Medical Director and Chief, Dermatology Section, Research and Technical Services Branch, Department of Health, Education and Welfare, Cincinnati, Ohio, *"Occupational Diseases of the Skin."*

4:00 GERRIT W. H. SCHEPERS, M.D., Director, Institute of Industrial and Forensic Medicine, Washington, D. C., *"Man Made Diseases."*

4:30 *Question and Answer Period.*







TAKE 5

...and find that a TB screening test has never been quite so easy

SWAB THE ARM— UNCAP A TINE TEST— PRESS—DISCARD THAT'S ALL THERE IS TO IT.

Comparable to the Mantoux in accuracy and sensitivity, the TUBERCULIN, TINE TEST is now available in plastic-capped units uniquely suited to general practice needs. They are so simple to use that you can test every patient with ease. Since it requires no refrigeration, the new package of five Tine Test units can stand on any convenient table in your examining rooms, ready for routine use. Side effects are possible but very rare: vesiculation, ulceration or necrosis at test site. Contraindications, none; but use with caution in active tuberculosis.

available as the new individually-capped unit, boxes of 5, or in cartons of 25

TUBERCULIN, TINE TEST

(Rosenthal) Lederle

LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, N.Y. 7899-4

Lederle

ARTHRALGEN® helps free





ARTHRALGEN®

Each tablet contains:

Salicylamide	250 mg.
Acetaminophen	250 mg.
Ascorbic acid (Vitamin C)	25 mg.

Arthralgen, a better-tolerated analgesic formulation of time-tested ingredients, works faster to free the arthritic from his pain without salicylate side effects. Since its analgesic components require no chemical conversion to act in the body, Arthralgen's pain relieving benefits are immediately available to provide a smoother, more rapid obtundation of pain than can be achieved with many true salicylates.

Arthralgen is especially useful for the prompt relief of early morning stiffness and pain with less risk of gastric irritation. And since Arthralgen contains no sodium it is safe for long-term use in arthritics who have other conditions which neces sitate sodium restriction.

ARTHRALGEN®-PR

Each tablet contains:

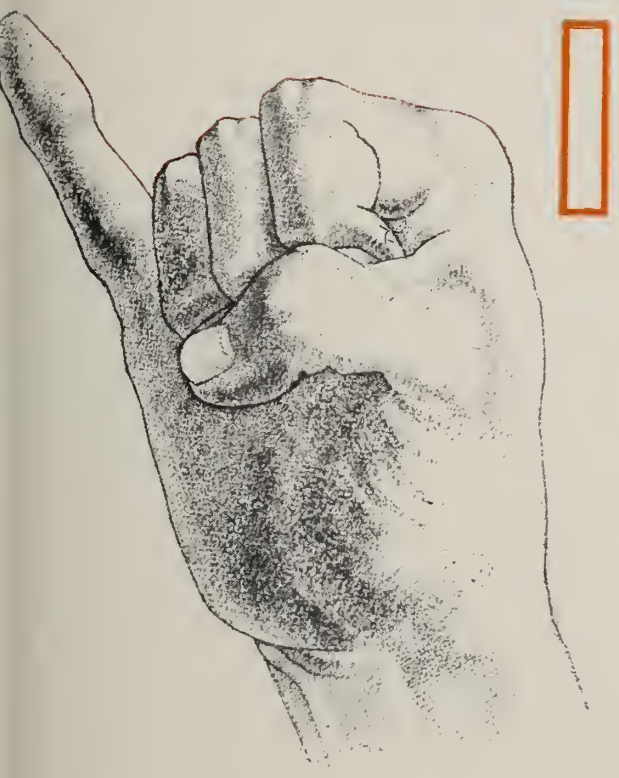
Salicylamide	250 m
Acetaminophen	250 m
Ascorbic acid (Vitamin C)	25 m
Prednisone	1 m

The basic Arthralgen formulation plus predn sone is indicated for patients who require steroic Prednisone has three advantages over cortison hydrocortisone, and ACTH. They are: (1) lack sodium retention, (2) absence of increased pota sium excretion, and (3) the unlikelihood of steroi induced hypertension.*

BRIEF SUMMARY

Arthralgen and Arthralgen-PR are indicated the management of rheumatoid arthritis, acu

arthritic joints from



I



N

gouty arthritis, rheumatoid spondylitis, osteoarthritis, bursitis, fibrositis, and neuritis. Arthralgen may be used for analgesia in colds, flu, and various myalgias.

DOSAGE: One or two tablets four times a day. After remission of symptoms, dosage should be reduced to the minimum maintenance level.

SIDE EFFECTS: Nausea, GI upset, or mild salicylism may rarely occur. Symptoms of hypercorticoidism dictate reduction of dosage of Arthralgen-PR.

PRECAUTION: Reduction in dosage of Arthralgen-PR given over a long period should be gradual, never abrupt.

CONTRAINDICATIONS: Hypersensitivity to any ingredient.

As with any drug containing prednisone, Arthralgen-PR is contraindicated, or should be administered only with care, to patients with peptic ulcer, tuberculosis, nephritis, diabetes mellitus, acute psychoses, Cushing's syndrome (or Cushing's disease), overwhelming spreading (systemic) infection, or predisposition to thrombophlebitis.

Arthralgen-PR is generally contraindicated in patients with uremia and viral infections, including poliomyelitis, vaccinia, ocular herpes simplex, and fungus infections of the eye. It is also contraindicated in patients with chicken pox or susceptible persons exposed to it.

SUPPLY: Arthralgen (white, scored) and Arthralgen-PR (yellow, scored) tablets are available in bottles of 100 and 500.

*Cohen, et al: J.A.M.A., 165:225, 1957.

A. H. ROBINS CO., INC.
RICHMOND, VIRGINIA

SAINT ALBANS

PSYCHIATRIC HOSPITAL

(A Non-Profit Organization)

Radford, Virginia

Telephone: 639-2482

STAFF

James P. King, M.D., Director

William D. Keck, M.D.
Clinical Director
James K. Morrow, M.D.
Silas R. Beatty, M.D.

Edward W. Gamble, III, M.D.
Morgan E. Scott, M.D.
J. William Giesen, M.D.
Internist (Consultant)

Clinical Psychology
Thomas C. Camp, Ph.D.
Artie L. Sturgeon, Ph.D.

Don Phillips
Administrator

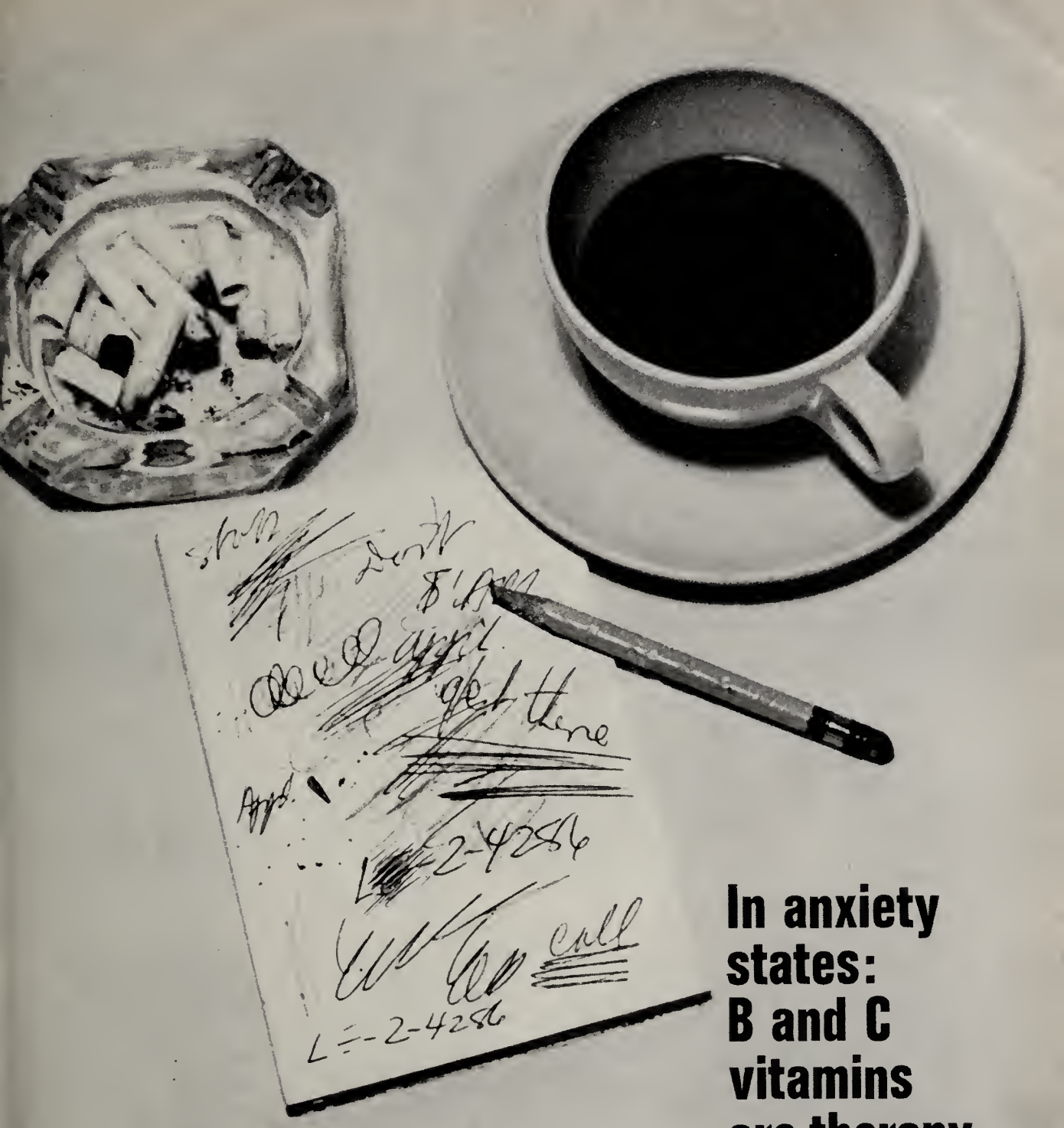
AFFILIATED CLINICS

Bluefield Mental Health Center
525 Bland St., Bluefield, W. Va.
David M. Wayne, M.D.
Phone: 325-9159

Beckley Mental Health Center
109 E. Main Street, Beckley, W. Va.
W. E. Wilkinson, M.D.
Phone: 253-8397

Charleston Mental Health Center
1119 Virginia St., E., Charleston, W. Va.
Malcolm G. MacAulay, M.D.
Phone: 344-3578

Norton Mental Health Clinic
Norton Community Hospital, Norton, Va.
Pierce D. Nelson, M.D.
Phone: 1090



In anxiety states: B and C vitamins are therapy

Stress formula vitamins are an important supportive measure in maintaining the nutritional status of the emotionally disturbed patient. With STRESSCAPS, B and C vitamins are present in therapeutic amounts to meet increased metabolic demands. Patients with anxiety, and many others undergoing physiologic stress, may benefit from vitamin therapy with STRESSCAPS.

STRESSCAPS®

Stress Formula Vitamins Lederle

FOR PROFESSIONAL RECOMMENDATION ONLY

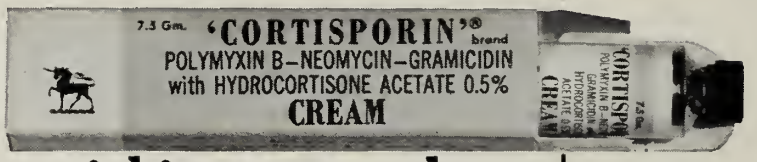
Each capsule contains:	
Vitamin B_1 (as Thiamine Mononitrate)	10 mg.
Vitamin B_2 (Riboflavin)	10 mg.
Niacinamide	100 mg.
Vitamin C (Ascorbic Acid)	300 mg.
Vitamin B_6 (Pyridoxine HCl)	2 mg.
Vitamin B_{12} Crystalline	4 mcgm.
Calcium Pantothenate	20 mg

Recommended intake: Adults, 1 capsule daily, for the treatment of vitamin deficiencies. Supplied in decorative "reminder" jars of 30 and 100; bottles of 500.

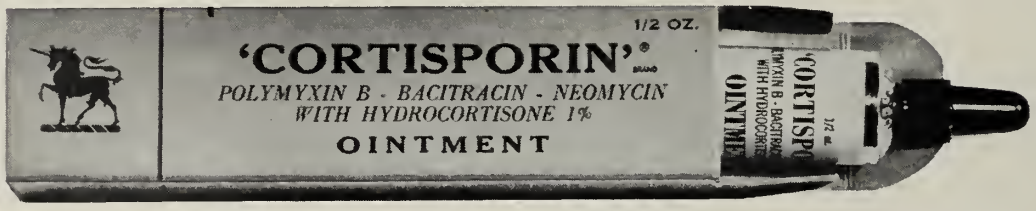
Lederle LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, N. Y.

8241-4

CHOOSE THE PRODUCT TO FIT THE NEED



a new vanishing cream base



a special low melting point base

anti-inflammatory
bactericidal
antipruritic
rarely sensitizing

CREAM—*Ingredients:* Each gram contains 'Aerosporin'® brand Polymyxin B* Sulfate 10,000 Units; Neomycin Sulfate (equivalent to 3.5 mg. Neomycin Base) 5.0 mg.; Gramicidin 0.25 mg.; Hydrocortisone Acetate 5.0 mg. (0.5%).

In a smooth, white, water-washable vanishing cream base with a pH of approximately 5.0. Inactive ingredients: liquid petrolatum, white petrolatum, propylene glycol, polyoxyethylene polyoxypropylene compound, emulsifying wax, distilled water, and 0.25% methylparaben as preservative.

Available: In tubes of 7.5 Grams.

OINTMENT—*Ingredients:* Each gram contains 'Aerosporin'® brand Polymyxin B* Sulfate 5,000 Units; Zinc Bacitracin 400 Units; Neomycin Sulfate 5 mg. (equivalent to 3.5 mg. Neomycin Base); Hydrocortisone 10 mg. (1%).

In a special white petrolatum base.

Available: In tubes of ½ oz. and ⅛ oz.

*U.S. Patent Nos. 2,565,057–2,695,261

Indications: Wherever inflammation or infection occurs and is accessible for topical therapy.

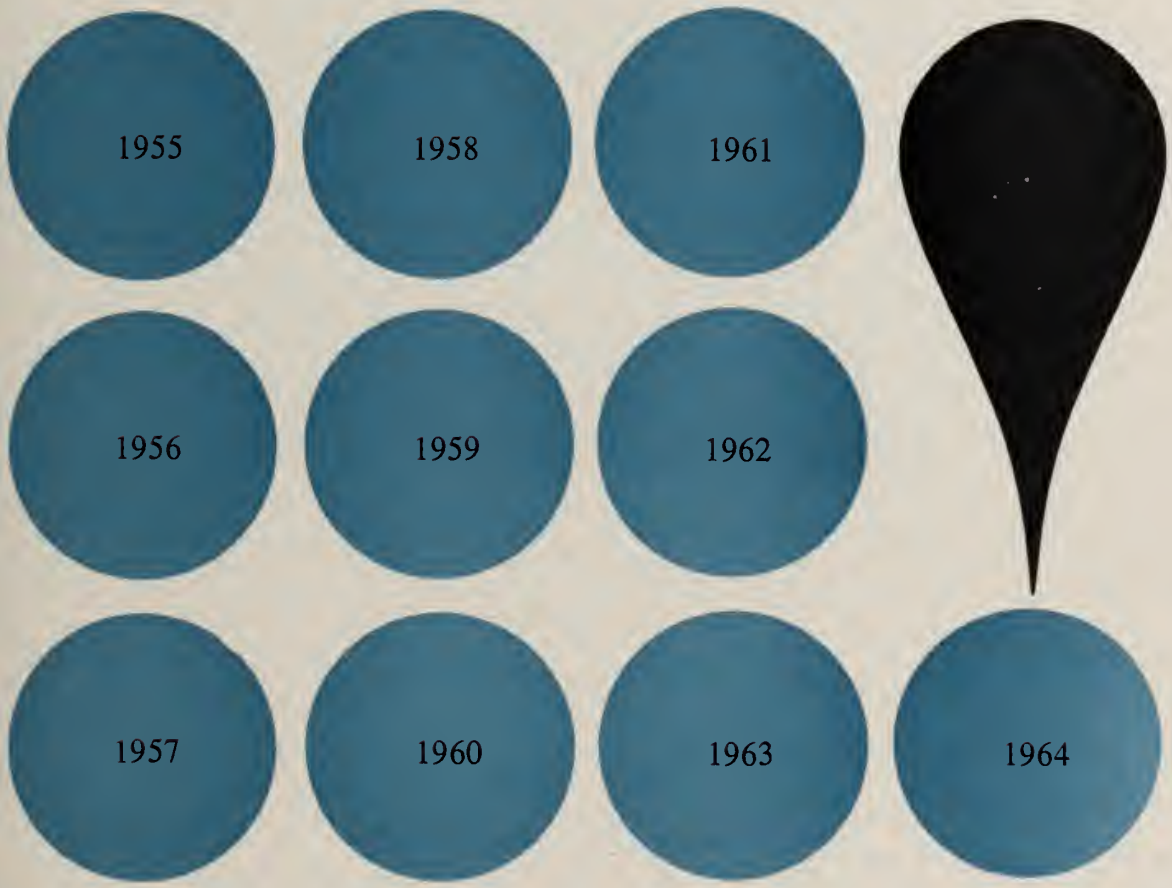
Contraindications: These drugs are contraindicated in tuberculous, fungal or viral lesions (herpes simplex, vaccinia and varicella).

Caution: As with other antibacterial preparations, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs.

Complete literature available on request from Professional Services Dept. PML.

BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, N.Y.

The clear conclusion from 10 years' experience...



belongs in every practice

Miltown®
(meprobamate)

CM-2026

WALLACE LABORATORIES/Cranbury, N. J.



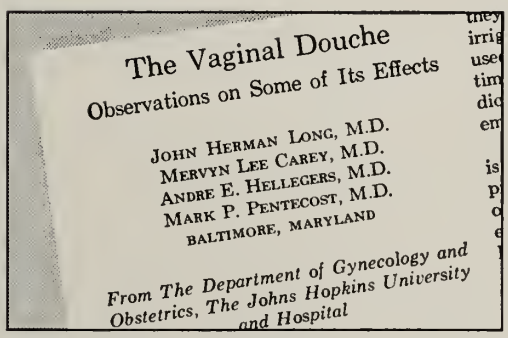
one of the fundamental drugs in medicine

Smith Kline & French Laboratories

SK&F

A Valuable Contribution To Medical Literature

A DEFINITIVE STUDY ON DOUCHING



The Vaginal Douche

Observations on Some of Its Effects

JOHN HERMAN LONG, M.D.
MERVYN LEE CAREY, M.D.
ANDRE E. HELLEGERS, M.D.
MARK P. PENTECOST, M.D.
BALTIMORE, MARYLAND

From The Department of Gynecology and Obstetrics, The Johns Hopkins University and Hospital

A SEARCH OF MEDICAL LITERATURE REVEALS NO COMPARABLE OBJECTIVE EVALUATION OF THE SUBJECT.

The authors state at the outset,

"Each physician has his own idea of the value or harm of the vaginal douche and many have expressed such ideas in writing. Such opinions have been arrived at without any intensive investigation or observation of subjects using douches as compared to those not using them. The purpose of this study is to report our observations on three groups of patients, one taking no douches, a second douching with a medicated solution* and a third douching with plain water."[1]

1. West. J. Surg., Obsts. & Gynec.: *71*:122-127, 1963

*The medicinal powder used in this study was META CINE®, a scientifically formulated preparation containing: papain, lactose, citric acid, methyl salicylate, eucalyptol, menthol and chlorothymol.

OBSERVATIONS BASED ON EXTENSIVE AND THOROUGH EXAMINATION SCHEDULE.

"One hundred patients were selected at random, regardless of their chief complaint, from the general population attending the Out-Patient Gynecology Clinic of The Johns Hopkins Hospital. Those selected were reexamined at 1, 3, 6, 9 and 12 months after the initial visit."

"At intervals patients were switched to the regimen of another group so that comparison of the effect of douching or not douching might be made in the same individual."

Three years were required to complete the study.

An evaluation of the objective findings of the study demonstrates that douching with META CINE® had the following effects on vaginal secretion:

- increased Doderlein organisms,
- proved effective in lowering WBC counts,
- proved effective in increasing glycogen content.

META CINE® was found to be a good antagonist to vaginal discharge and irritation—and also proved effective in reducing cervicitis.

No untoward effects of douching were encountered in the study.

Reprints of the complete study and professional samples of Meta Cine are available on request.

BRAYTEN PHARMACEUTICAL COMPANY • *Chattanooga 9, Tennessee*



YOU:

HISTORY: 20 years of study, plus internship/residency. Substantial investment in professional location, equipment. **SIGNS and SYMPTOMS:** Reports that large home, growing family and minimal professional standard of living are a concern. Still ahead—college costs, retirement, natural estate ambitions. **PROGNOSIS:** Needs 15-20 peak years of income to pay off education, home; rear family; retire. All this while battling tough taxes, and without the benefit of social security or company paid life and disability insurance, pension plan. **TREATMENT:** Learn about Mutual Benefit Life's "Seven Significant Benefits". Talk with a M.B.L. representative. See how a built-for-you plan solves specific problems through unique disability clauses, unusually high cash and loan values, liberal survivor income options—and more. Write on your own professional letterhead for exclusive report covering a full range of typical insurance requirements for physicians. Just ask for a copy of *Consultant's Report.*

Those who plan ahead get ahead **MUTUAL BENEFIT LIFE** INSURANCE COMPANY, NEWARK, NEW JERSEY

CARRIER OF YOUR TENNESSEE MEDICAL ASSOCIATION GROUP LIFE INSURANCE PLAN

EDWARD C. DUNN
1104 Sudekum Bldg.
Nashville, Tenn.

SETH W. SIZER
1211 James Bldg.
Chattanooga, Tenn.

THERON M. LEMLY
1309 Poplar Ave.
Memphis, Tenn.



In Sprains, Strains and Muscle Spasm, 'Soma' Compound

numbs the pain...not the patient

A potent analgesic and
a superior muscle relaxant

1. A sprain or fracture is not a big clinical problem—but it does hurt. And if there is housework to do and kids to mind, the patient needs something to numb the pain.

2. A.P.C. compounds have limited usefulness; and the patient can buy them without your prescription. Unfortunately, most of them are too mild to be effective for sprains—and more potent products too often make the patient feel 'dopey'.

3. 'Soma' Compound is ideal in these cases. Since it contains both 'Soma' (carisoprodol) and acetophenetidin it is both a potent analgesic and a superior muscle relaxant; it also contains caffeine to offset any drowsiness *("numbs the pain... not the patient")*.

4. Why not try 'Soma' Compound? Dosage is 1 or 2 tablets q.i.d. For more severe pain, try 'Soma' Compound + Codeine. Dosage: 1 or 2 tablets q.i.d.

5. Hypersensitivity to carisoprodol may occur rarely. Codeine may produce addiction, nausea, vomiting, constipation or miosis.

Soma® Compound
carisoprodol 200 mg., acetophenetidin 160 mg., caffeine 32 mg.

Soma® Compound + Codeine
carisoprodol 200 mg., acetophenetidin 160 mg., caffeine 32 mg., codeine phosphate 16 mg. (Warning—may be habit forming.)

®WALLACE LABORATORIES / *Cranbury, N.J.*

CSO-9193

Nashville Surgical Supply Company

The Physician and Hospital's Complete Supply & Service Source

Physicians equipment and supplies

Hospital equipment and supplies

Laboratory equipment and supplies

THE MOST COMPLETE DRUG AND BIOLOGICAL SUPPLY SOURCE IN TENNESSEE

Distributor for Standard and Mattern X-Ray Equipment and Supplies

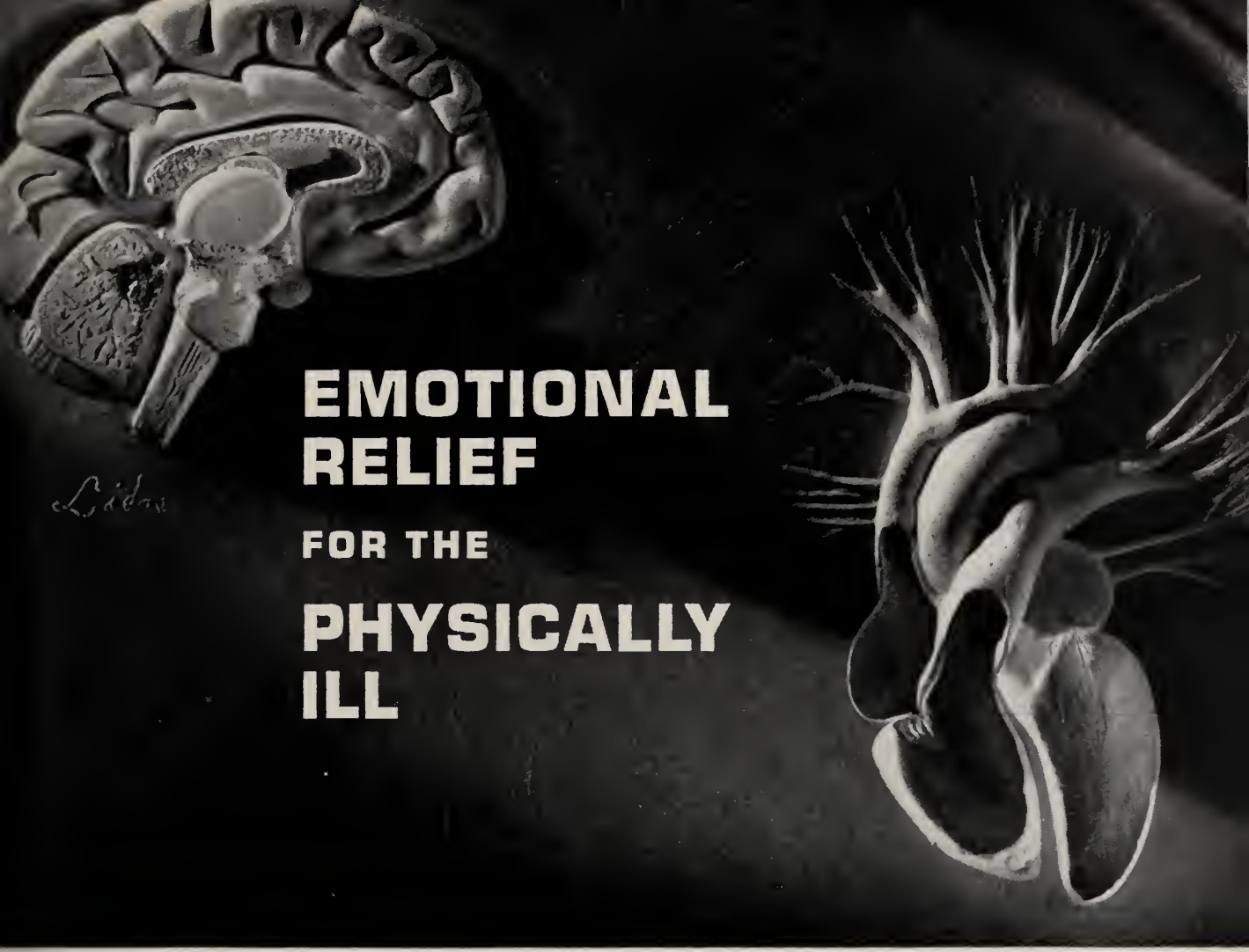
24-Hour Emergency Service

Nashville Surgical Supply Co., Incorporated

1911 Church St.

Nashville, Tennessee

Phone AL 5-4601



RELIEVES ANXIETY, APPREHENSION AND TENSION...



All day long

. . . keeps the patient calm, and the mind clear.



All night too

. . . aids restful sleep, with no barbiturate hangover.

MEPROSPAN®-400

(MEPROBAMATE 400 MG. SUSTAINED RELEASE)

Simplified, convenient dosage for emotional relief.

Side effects: 'Meprospan' (meprobamate, sustained release) is remarkably free of untoward reactions. Daytime drowsiness has not been reported. Rare allergic or idiosyncratic reactions may occur, generally developing after 1-4 doses of the drug.

Contraindications: Previous allergic or idiosyncratic reactions to meprobamate contraindicate subsequent use.

Precautions: Should administration of meprobamate cause drowsiness or visual disturbances, the dose should be reduced. Operation of motor vehicles or machinery or other activity requiring alertness should be avoided if these symptoms are present. Effects of excessive alcohol may possibly be increased by meprobamate. Prescribe cautiously and in small quantities to patients with suicidal tendencies. Massive overdosage may produce lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction; withdraw gradually after prolonged use at high dosage.

Complete product information available in the product package, and to physicians upon request.

Usual adult dosage: One 400 mg. capsule or two 200 mg. capsules at breakfast; repeat with evening meal.

Supplied: 'Meprospan'-400 (meprobamate 400 mg.), 'Meprospan'-200 (meprobamate 200 mg.), each in sustained-release capsules. Both potencies in bottles of 30.

CME-760

WALLACE LABORATORIES *Cranbury, N. J.*

THE DERMATOSES THAT WERE STEROID-UNTREATABLE

Salt and water retention, edema, overstimulation the appetite, excessive weight gain, mood swing these were some of the problems that used to confr physicians when they wanted to prescribe steroids dermatoses. For patients already overweight, or w edema associated with cardiovascular disease, those who were tense and anxious, steroid treatm could aggravate their problems. But with the adv of ARISTOCORT® Triamcinolone, many of the patients became "steroid-treatable." The reason: I only did *this* steroid provide gratifying symptoma relief, but it did so *without* the penalty of overstir lation of the appetite, excessive weight gain, salt a water retention, edema, and undesirable eupho And these benefits have been confirmed for ot patients with steroid-susceptible disorders, as wel those formerly untreatable.



Side Effects: Since it may, under some circumstances, produce many of the unwanted effects common to all cortisone-like drugs, discrimination should always be exercised in administering ARISTOCORT® Triamcinolone. Any of the Cushingoid effects are possible, as are purpura, G.I. ulceration, increased intracranial pressure and subcapsular cataract. Corticosteroids generally may mask outward signs of bacterial or viral infections. Catabolic effects to watch for include muscle weakness and osteoporosis. Weight loss may occur early in treatment but is usually self-limiting. *Contraindications:* While the only absolute contraindications are tuberculosis, herpes simplex and chicken pox, there are some relative contraindications peptic ulcer, acute glomerulonephritis, myasthenia gravis, osteoporosis, fresh intestinal anastomoses, diverticulitis, thrombophlebitis, psychic disturbance, pregnancy, infection) to weigh against expected benefits.

A single daily dose may provide effective control, is convenient for the patient, and can be employed in both initial and maintenance therapy.

MAXIMUM STEROID BENEFIT—MINIMUM STEROID PENALTY

Aristocort®

Triamcinolone

1 mg., 2 mg., 4 mg. or 16 mg. tablets

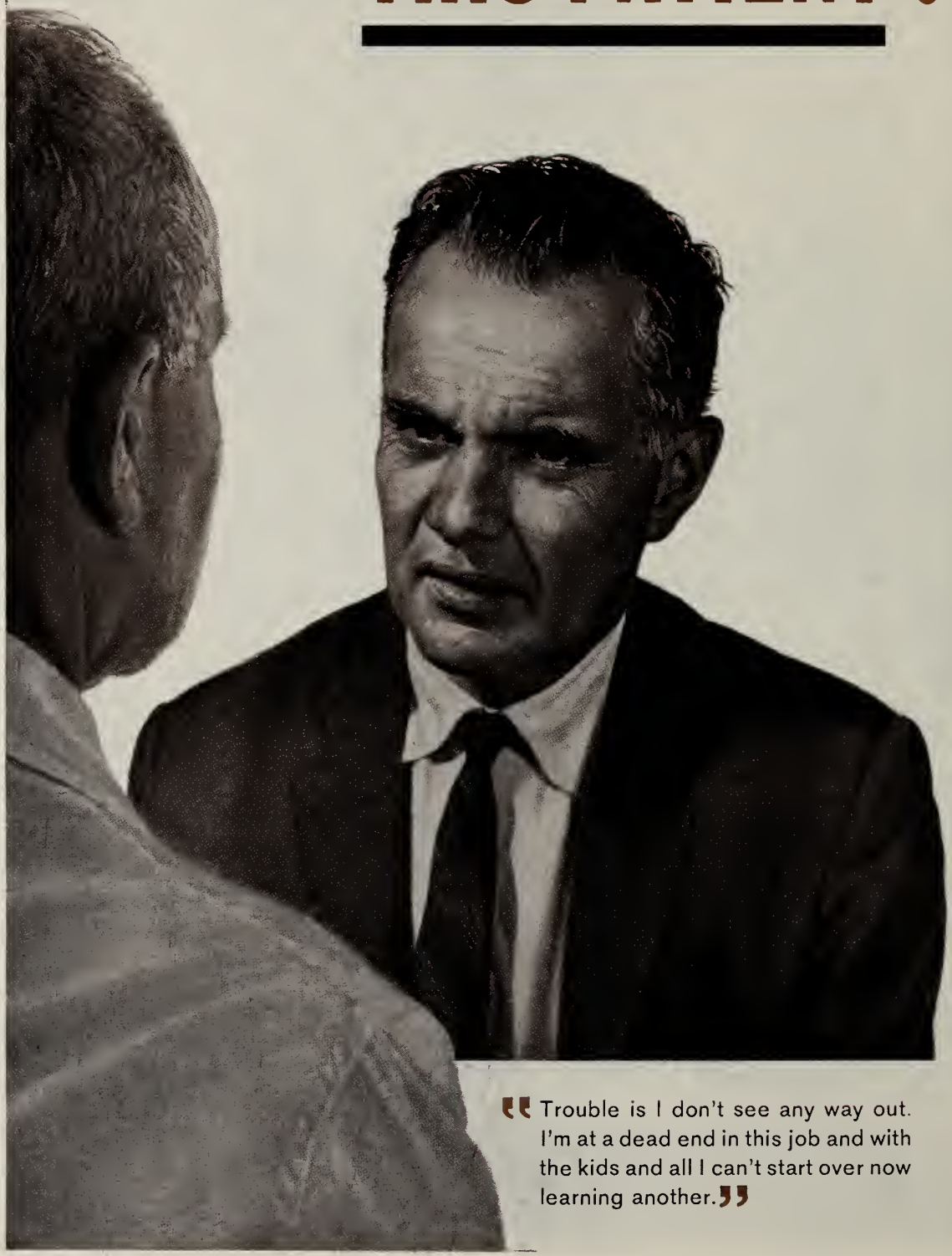
LEDERLE LABORATORIES • A Division of AMERICAN CYANAMID COMPANY, Pearl River, New York

Lederle

272-4



RECOGNIZE THIS PATIENT?



"Trouble is I don't see any way out. I'm at a dead end in this job and with the kids and all I can't start over now learning another."

When you recognize depression and anxiety traceable to an emotionally charged situation with no somatic disorder

—*start the patient on 'Deprol'*

Typical situations in which 'Deprol' is indicated:

marital or other family problems ■ death of a loved one ■ financial worries ■ fear of cancer, heart disease or other life-threatening illness ■ pre- and post-operative apprehensions ■ retirement problems, and many other stressful situations which cause the patient to feel a sense of loss, guilt or unworthiness

Advantages of 'Deprol'

1. By relieving both depression and anxiety, 'Deprol' lifts the mood of the depressed patient without the agitation and "jitters" that often accompany "energizer" therapy alone.
2. 'Deprol' restores normal sleep, relaxes physical tensions, and improves appetite.
3. 'Deprol' acts rapidly—patients often respond within a week or two.
4. 'Deprol' is relatively nontoxic and free of side effects.
5. When depression and anxiety accompany physical illness, 'Deprol' is compatible with drugs used to treat these organic conditions.

Deprol®

meprobamate 400 mg. + benactyzine hydrochloride 1 mg.

Side effects: Slight drowsiness and, rarely, allergic or idiosyncratic reactions, due to meprobamate, and occasional dizziness or feeling of depersonalization in higher dosage, due to benactyzine, may occur. **Contraindications:** Previous allergic or idiosyncratic reactions to meprobamate contraindicate subsequent use of meprobamate or meprobamate-containing drugs. **Precautions:** Should administration of meprobamate cause drowsiness, the dose should be reduced. Operation of motor vehicles or machinery or other activity requiring alertness should be avoided if these symptoms are present. Effects of excessive alcohol may possibly be increased by meprobamate. Although suicides with 'Deprol' have not been reported, prescribe cautiously and in small quantities to patients with suicidal tendencies. Massive overdosage of meprobamate may produce lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse. Even though it has not been reported with 'Deprol', consider the possibility of dependence, particularly in patients with history of drug or alcohol addiction; withdraw gradually after prolonged use at high dosage. *Complete product information available in the product package, and to physicians on request.*

Usual adult dosage: 1 tablet t.i.d. or q.i.d. May be increased gradually, as needed, to 6 tablets daily. With establishment of relief, may be gradually reduced to maintenance levels. **Supplied:** Light-pink, scored tablets Bottles of 50.

WALLACE LABORATORIES / *Cranbury, N. J.*

CD-1983



thrown for a loss...

Keeping flies out of pharmaceutical production areas is important, yet entrances must accommodate heavy traffic of people and materials. In fact, at Eli Lilly and Company, the entrances to certain production facilities where traffic is heaviest have no screens or doors. ☐ This makes it look easy for flies to get in. But let one try it and he is literally picked up by a fast-moving blast of air and thrown for a loss—back outside. This "curtain of air," moving down and out from the top of the open doorway, bars the entrance and keeps flies out . . . still another step demonstrating the care that goes into the finished product.

Eli Lilly and Company • Indianapolis 6, Indiana, U.S.A.

Lilly

401004

Journal of the Tennessee Medical Association
OWNED AND PUBLISHED BY THE ASSOCIATION
Volume 57 AUGUST, 1964 Number 8

The Surgical Treatment of Acute Frontal Sinusitis*

M. E. GLASSCOCK, III, M.D.,† Memphis, Tenn.

This clinical entity usually appears in association with an acute respiratory infection. Though the early and uncomplicated case can usually be managed conservatively, surgical drainage may become necessary as outlined by the author.

Introduction

The treatment of acute sinusitis is a subject of some debate in this modern era of antibiotic therapy. Questions arise as to whether sinus infections are really the problem today that they were prior to the discovery of these agents. Is surgery ever indicated in the treatment of acute sinusitis? How effective is conservative therapy, and has the widespread use of antibiotics influenced the basic surgical principle of drainage?

This discussion will be limited to the acute infections involving the fronto-ethmo-sphenoid complex of sinuses. These three sinuses will be discussed together because of their close anatomic relationship and the frequency with which they are commonly involved in infection. In this presentation the term acute frontal sinusitis will be synonymous with the broader term of acute fronto-ethmo-sphenoid sinusitis.

The incidence of acute frontal sinusitis with complications is probably lower in private practice than in a teaching hospital where the patients are of a different socio-economic status. Ten of such cases have been seen on the Otolaryngology Service of the University of Tennessee College of Medicine, in the past eighteen months. A representative case has been selected for presentation.

Case Report

A 14 year old Negro boy, was first seen in the John Gaston Emergency Room on the evening of Jan. 18, 1963, with a chief complaint of headache and swelling of the right eye. This boy had been well until 4 days prior to admission when he suddenly developed a right frontal headache. The following day the right upper eyelid began to swell. No history of an upper respiratory tract infection could be obtained. He had been told by his family physician 2 years previously that he had "sinus trouble." At that time he had complained of mild frontal headaches.

Examination on admission revealed a T. 102°, P. of 100, and R. of 24. The right eye was markedly edematous with resulting proptosis, prolapsed conjunctiva and a fixed eyeball. Visual acuity was extremely poor. The edema involved the frontal and temporal areas and extended along the zygomatic arch to involve the preauricular area. The nasal passages were open bilaterally and there was some hyperemia of the mucosa of the right side. A trickle of white purulent material could be seen in the middle meatus. The heart and lungs were normal. Cervical lymph nodes were enlarged and tender. The neurologic examination revealed the patient to be lethargic but there were no localizing signs. Admission WBC. count was elevated and x-ray films showed the right frontal sinus to be cloudy.

The treatment was started with antibiotics orally and decongestants. The following day he had developed a mild nuchal rigidity and a positive Kernig sign. Under local anesthesia, an external drainage procedure was performed obtaining a copious amount of purulent material from both the frontal and ethmoid sinuses. Culture and sensitivity studies were ordered. Rubber catheters were placed in the sinuses for drains. The patient was given large doses of antibiotics intravenously consisting of 20 million units of aqueous penicillin 500 mg. of Chloramphenicolcetin, and 2 Gm. of Gantrisin every 8 hours. The postoperative course was not smooth. He con-

†From the Department of Otolaryngology, University of Tennessee, College of Medicine, Memphis, Tenn.

*Read at the meeting of the Tennessee Academy of Ophthalmology and Otolaryngology, April 13, 1964, Memphis, Tenn.

tinued to drain purulent material and to spike temperature elevations. His sensorium remained depressed. Purulent material was found in pockets under the periosteum of the forehead and scalp. Incision and drainage was done on these areas.

One week after the external drainage, he was responsive; his vital signs and his extraoccular muscle function had returned to normal. The original culture had been reported by this time and the offending organism was a Beta hemolytic streptococcus, sensitive to penicillin and chloramphenicol. Ten days after admission antibiotics intravenously were stopped and he was symptom-free. He was maintained on penicillin intramuscularly until Feb. 6, when he was discharged.

Follow-up visits in the Out-patient Department showed that the patient remained symptom-free and his visual acuity had returned to normal. X-ray examination of the sinuses was reported as normal. There was slight ptosis of the right eyelid without diplopia when last seen in July of 1963.

Discussion

Most acute infections of the frontal sinus are probably never seen by the otolaryngologist and are treated by the family physician. It is the acute fulminating infections with complications that require the knowledge and surgical skill of the rhinologist.

Due to the nature of the complications and the confusion arising in the diagnosis of acute frontal sinusitis, the first to see the patient in consultation will often be the opthalmologist or neurologist.

The etiology of this condition is not complex. An acute infection is usually seen in association with an acute infection of the upper respiratory tract, or associated with infections involving the other sinuses. There is, occasionally, an isolated infection involving the frontal and ethmoid complex only. Chronic sinusitis may develop due to a mechanical obstruction of the nasofrontal duct or opening.

This obstruction may be due to polyps (allergic or infectious), osteomas of the frontal sinus and, rarely, to a deviated septum or an enlarged middle turbinate. This is important to this discussion only because there may be an exacerbation of a chronic frontal sinusitis and the obstruction must be recognized and removed. Swimming and diving in contaminated water is a frequent contributing factor.[3]

The most common bacteria encountered are the hemolytic and nonhemolytic Streptococci, Pneumococci, and the hemolytic and nonhemolytic Staphlococci. In recent years, the Staphlococci are becoming more prominent. In addition, *Neiserria cararrhalis, Hemophilus influenzae, H.* parainfluenzae and Proteus bacilli are being isolated more frequently. Fungi are occasionally found but their incidence is low.[4]

The diagnosis of acute frontal sinusitis depends upon symptomology and laboratory studies. The symptoms depend upon the severity of the infection, the other sinuses involved, the duration of the illness and whether any complications have occurred. The typical case, early in the infectious process, is characterized by pain in the frontal area with tenderness over the floor of the sinus. The nose is usually congested on the involved side and purulent material may or may not be observed.

Systemic symptoms of fever, chills and malaise may be present. The presenting symptom is usually pain in the frontal area; therefore headache becomes important in the differential diagnosis of acute frontal sinusitis.

In the early case, x-ray findings may be equivocal. As the disease process progresses with accumulation of fluid and thickening of the mucous membrane, the x-ray films will become cloudy and confirm the diagnosis.

If the infection progresses unattended or is inadequately treated, complications develop and the diagnosis becomes more difficult and the differential broadens. The most common complication seen at the John Gaston Hospital has been swelling of the upper eyelid with periorbital edema, cellulitis, and proptosis of the eye. There has also been a rupture of either the lamina papyracea of the ethmoid labyrinth or the floor of the frontal sinus. The lamina papyracea will usually rupture more readily than the floor of the frontal sinus. When rupture occurs, regardless of site, purulent material is released and dissects beneath the periosteum. Without intervention a fistulous tract will develop. Fistulae occurring above the level of the medial palpebral ligament are usually due to the rupture of the floor or anterior wall of the frontal sinus.[2] The anterior wall may rupture, but this is uncommon because the floor is of thinner, more compact, bone.

with rupture and extrusion, purulent material can dissect beneath the periosteum and cause swelling over the forehead and scalp. This dissection might simulate a Pott's puffy tumor but in reality has no underlying osteomyelitis.[5] The infection may involve the frontal bone with osteomyelitis, however, and spread to involve large areas of the entire skull through Breschet's canals.[2]

An infection in the frontal sinus may spread to involve the meninges through a defect in the posterior wall (congenital or carious) and by way of veins and lymphatics.[1] In addition to a purulent meningitis, an extradural abscess or a frontal lobe brain abscess may occur.[2-12] It has been shown that the veins and lymphatics of the frontal sinus communicate with the meninges and cranial sinuses.[1]

The cavernous sinus may become involved, resulting in a cavernous sinus thrombosis. In fact, this condition is to be considered in the differential diagnosis of an acute frontal sinusitis with periorbital edema and fixation of the eyeball.

One particularly serious complication is the loss of visual acuity associated with prolonged periorbital edema and global compression. There has been one case of total blindness in a patient seen at the John Gaston Hospital. In most cases the loss had not been extremely severe, and in some patients the visual acuity had returned to normal, or near normal.

All swellings of the upper eyelid are not associated with frontal disease. An allergic reaction may cause the eyelid to swell, and some systemic conditions cause periorbital edema. Blepharitis of the upper eyelid may occur. Insect bites must also be considered. Intraorbital tumors may cause symptoms and signs similar to those found in acute disease of the frontal sinus.

In establishing the diagnosis of acute frontal sinusitis it is important to consider all the possibilities mentioned. With the subjective and objective symptoms and the x-ray findings, the diagnosis should be made easily by the otolaryngologist. The prognosis depends upon early diagnosis, recognition of complications and the correct treatment of the infection. If complications occur, sequellae are apt to follow. Many acute infections when treated early and properly leave no permanent damage, and then the frontal sinus and the nasofrontal duct return to normal. Occasionally the condition progresses to become chronically infected and will require further medical and surgical treatment.[7] The treatment of acute frontal sinusitis depends upon the stage of the infection. Early in the course of the infection, antibiotics, oral and topical decongestants and analgesics will relieve the majority of cases. In exacerbations of chronic sinus infections it will, occasionally, be necessary to remove a polyp or fracture a middle turbinate medially to obtain drainage.

When sufficient drainage is not obtained, when complications occur, or when pain becomes intractable, external drainage is mandatory.[11] The use of antibiotics has not changed the basic principle of surgery that require drainage of a pus-filled cavity. Until drainage is established, acute frontal sinusitis may not respond to medical therapy. In the acute infection, only drainage should be sought.[9] Any attempt to remove the mucous membrane of the sinus at this time might lead to osteomyelitis of the frontal bone.

The procedure for external drainage of the frontal and ethmoid sinuses is not complicated and can be done either under local or general anesthesia.[10] A small (2.5 cm.) incision is made below the eyebrow and carried down onto the nose midway between the medial canthus and the bridge of the nose. Four silk retraction sutures are placed for exposure and the incision extended through the periosteum. An elevator is used to lift the periosteum laterally, freeing the trochlear pulley, and giving exposure to the damina papyracea and the floor of the frontal sinus. A gouge of motor-cutting burr is used to open into the frontal sinus and the ethmoid labyrinth simultaneously. (Fig. 1). The purulent material is evacuated from the sinus, culture and sensitivity studies are ordered, and a large bore rubber or polyethylene tube (14-22 French) is placed into the frontal sinus. Since the ethmoid sinus is usually involved, a Freer elevator is swept quickly through the labyrinth to fracture the septae and open the cells. The elevator is then passed into the nose so a large opening is made from the floor of the frontal sinus into the

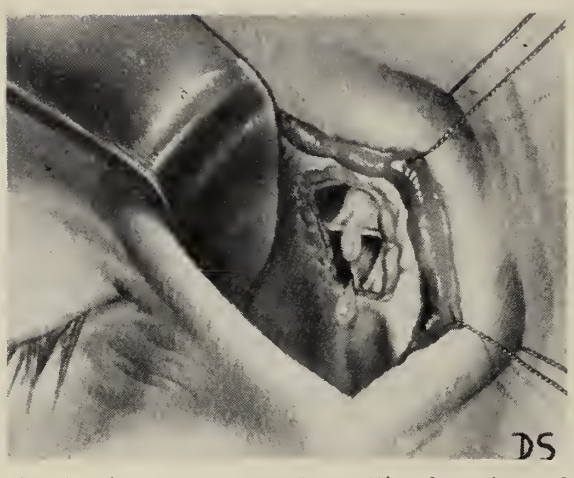


FIG. 1. A gouge or a motor-cutting burr is used to open into the frontal sinus and the ethmoid labyrinth simultaneously.

middle meatus. A drainage tube of similar size is placed in this opening and brought out into the nose. This last procedure is particularly important because in most instances the greatest amount of sinus is in the ethmoid labyrinth. This is particularly true in young children in whom the frontal sinus had not yet developed.[6] Children with acute ethmoiditis and periorbital edema must have external drainage if the infection is to be brought under control.[8] The drainage tubes are brought out through the skin incision and are left until drainage no longer occurs and the patient is symptom free. (Fig. 2). This period has varied from ten days to three weeks. It may be necessary to keep these patients on antibiotics from four to six weeks.

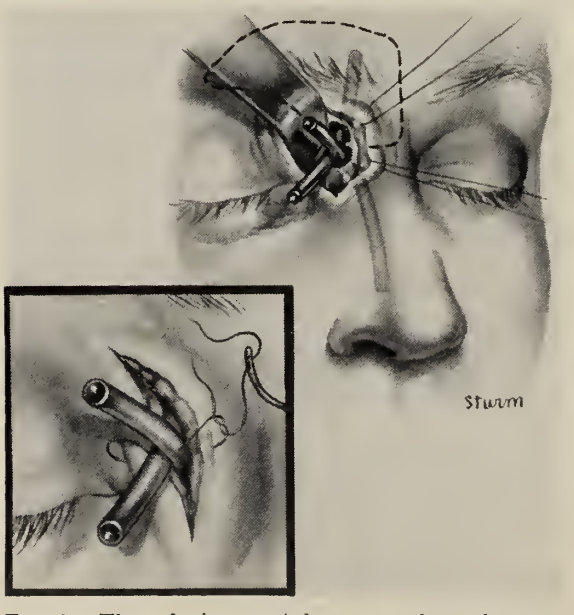


FIG. 2. The drainage tubes are brought out through the skin incision and are left until drainage no longer occurs and the patient is symptom-free.

Sequellae of the operative procedure do occur. There may be ptosis of the upper eyelid and diplopia due to interference with the trochlear pulley. In the majority of cases no sequellae arise and the incision is barely noticeable when healed.

Summary

Acute fronto-ethmo-sphenoid sinusitis usually occurs in association with an acute upper respiratory infection or by direct contamination from the other sinuses.

The patient with early uncomplicated sinus can be treated by conservative medical therapy. If the infection is unattended or is inadequately treated, complications will ensue. When this situation occurs, or when pain becomes intractable, external drainage is mandatory. The long term prognosis is probably good and few sequellae develop if the patient is seen early and managed properly.

Acknowledgment. Photographs of drawings explaining surgical procedure for the external drainage of the frontal and ethmoid sinuses were used through the courtesy of Dr. W. Likely Simpson, 860 Madison Avenue, Memphis, Tennessee.

References

1. Butler, Ralph: Miningitis due to Frontal Sinus Suppuration, with a Report of Three Fatal Cases, Ann. Otol., 29:666, 1920.

2. Dawes, J. D. K.: Management of Frontal Sinusitis and Its Complications, Laryng. 75:297, 1961.

3. Fraser, G. A.: The Management of Acute Sinusitis, Practitioner, 182-183:686, 1959

4. Heatly, Clyde A.: Current Status of Therapy in Paranasal Sinusitis, J.A.M.A. 178:1021, 1961.

5. Irsigler, F. J.: Intracranial Infections of Rhinogenous Origin, S. Afr. Med. Jour., 33:289, 1959.

6. Lodge, W. O.: Frontal Sinusitis, Arch. Otolaryng., 68:542, 1958.

7. Sanders, Sam H.: Memphis, Tennessee (Personal Communication).

8. Simpson, W. Likely: The Nasal Sinuses, Present Status of Surgical Management, Eye Ear Nose Throat Monthly, 35:505, 1956.

9. Simpson, W. Likely: Surgical Treatment and Complications in Cases of Acute Sinusitis, Arch. Otolaryng. 32:25, 1940.

10. Simpson, W. Likely: Sinus Surgery, Trans. Amer. Acad. of Ophthal. and Otolaryng., pp. 897, Nov.-Dec., 1943.

11. Simpson, W. Likely: Osteomyelitis of the Skull Resulting from Infection of the Sinuses, Arch. Otolaryng., 37:463, 1943.

12. Skillern, Ross Hall: Extradural Abscess Complicating Frontal Sinusitis, Report of A Case: Ann. Otol., 31:997, 1922.

The authors review syndromes which may simulate each other though of diverse causes. They consider treatment as related to the several causes.

Pulseless Disease

THOMAS R. HARRIS, M.D. and CHARLES B. McCALL, M.D.,* Memphis, Tenn.

Pulseless disease is a relatively infrequent condition characterized by an occlusive process in the branches of the aortic arch resulting in complete or almost complete absence of arterial pulsation in one or more of the vessels in the neck or upper extremity. The original description of symptoms resulting from narrowing of brachiocephalic arteries was made in 1839.[1] The term "pulseless disease" was first used in 1951 to describe an arteritis of young women involving the branches of the aortic arch.[2] This label immediately gained wide acceptance and has since been rather improperly applied to a variety of syndromes in which there is absence of one or more of the pulses in the neck or upper extremity. The variety of terms which have been used in describing thrombo-obliterative diseases of branches of the aortic arch has led to some confusion.

The most common of these synonyms, in addition to pulseless disease, are as follows: aortic arch syndrome, Takayasu's disease, Martorell's syndrome, reversed coarctation, brachiocephalic arteritis, segmental thrombo-obliterative disease of the supra-aortic trunks, and variations of the latter term.

Since "pulseless disease" has, by popular usage, been applied to almost any condition which results in decreased or absent pulses in the neck or upper extremity, it is obvious that no one etiology, no one group of descriptive features, and no one plan of therapy is applicable in all cases. Consideration of the cause, the location, and the extent of arterial obstruction is necessary to understand the clinical picture presented.

Etiology

Idiopathic Arteritis of Young Women. Takayasu[3], in 1908, first described the ophthalmologic changes associated with obliteration of the aortic arch vessels, and a colleague, Doctor Onishi, correlated the absence of radial pulses with the ophthalmologic findings. Formerly most of the cases of this type of arteritis have been in Japanese literature. Although reports indicate that the condition is of widespread geographic distribution, the disease remains almost nonexistent in young women in this country.[4] It is also reported that the disease may occur occasionally in men, and recently it has been linked with acquired atypical coarctation of the thoracic and abdominal aorta.[5]

Atherosclerosis. The majority of occlusions of branches of the aortic arch in this country is due to atherosclerotic disease. The occlusion may be partial or complete and may involve one of many vessels. Occasionally it is relatively localized and found in patients younger than those usually developing symptoms from atherosclerosis.

Syphilitic Aortitis. At one time this was considered to be the most common cause of aortic arch occlusion. The majority of one hundred cases of aortic arch syndrome reviewed in 1953 was believed to be due to late syphilis.[6] Both syphilitic arteritis and syphilitic aneurysms can produce obstruction of aortic arch branches.

"Nonspecific" Arteritis. This group includes a number of poorly defined cases of arterial obstruction occurring in men and older women in the United States. It may represent atypical atherosclerotic thrombotic disease.

Miscellaneous. Dissecting aneurysm, trauma, arterial thrombo-embolism, tumors, and the thoracic outlet syndrome may occasionally cause occlusion of the aortic arch vessels. Differentiation must also be made between aberrant radial artery and high coarctation of the aorta.

Diagnosis

Symptoms depend upon the location of

*From the Department of Medicine, University of Tennessee College of Medicine, Memphis, Tenn.

the principal vascular obstruction, the adequacy of collateral circulation, and the presence or absence of associated disease. In general they are due to (1) subclavian artry insufficiency, (2) basilar artery insufficiency, and (3) carotid artery insufficiency.

Subclavian artery insufficiency symptoms vary but include coolness, tingling, numbness, burning, and aching pain in the fingers or hand. There may be pain or claudication of the involved upper extremity at rest. These ischemic symptoms are sometimes absent, frequently minimal, but sometimes seem out of proportion to the clinical signs of decreased blood flow.

Vertebral-basilar insufficiency. The vertebral-basilar system begins as the vertebral artery, which is the first branch of the subclavian. The two vertebrals join at the base of the brain to form the basilar artery from which arise the posterior cerebral arteries to supply the brain-stem, cerebellum, occipital and temporal lobes of the brain. Symptoms of vertebral-basilar ischemia characteristically involve the vestibular, visual and auditory systems and sometimes the upper extremity. There may be vertigo, staggering, visual difficulties, tinnitus, unilateral or bilateral paresthesias, weakness of the arms and face, dysarthria, and dysphagia.

An occlusive lesion in the subclavian proximal to the origin of the vertebral artery may result in reversed flow in this vertebral artery thus "stealing" blood from the basilar artery and from the opposite vertebral. The hind-brain must then be supplied with blood through the carotids and the anatomic arrangement of the circle of Willis. The circle of Willis is not always able to maintain adequate blood supply in instances of insufficiency of the basilar artery, and the frequent association of occlusive disease of other vessels influences the incidence of symptoms.

Carotid artery insufficiency may cause neurologic symptoms which are difficult to differentiate from those seen with vertebral-basilar insufficiency. Characteristic findings include visual disturbances, temporary homolateral blindness which may be associated with syncope, jaw pain with chewing—due to arterial insufficiency to muscles of mastication—as well as confusion and lateralizing sensory or motor deficits.

Physical signs of obstruction of aortic arch vessels include pulse deficits, bruits, and diminished blood pressure in the involved vessels. The blood pressure should be compared in both arms, carotid pulses palpated, and auscultation performed for the presence of carotid or subclavian bruits. At times, a continuous murmur with systolic accentuation may be heard, since the arteries distal to the obstruction are so hypotensive that blood flow through collateral channels is continuous. Ophthalmodynamometry is a valuable addition to the routine vascular examination and may demonstrate lowered retinal artery pressure resulting from carotid artery involvement.

The external appearance of the arms in instances of vascular insufficiency is frequently normal. The hand is usually warm and pink at rest. There may be slight coolness, and blanching may occur with elevation. Trophic changes and ischemic gangrene are unusual. Ophthalmologic findings vary but may include decreased visual acuity, cataracts, retinal hemorrhages, arteriovenous anastomoses, microaneurysms, and mydriasis. Neurologic signs are identical to those of intracerebral disease and are not otherwise of diagnostic value.

Laboratory findings are not often helpful. The sedimentation rate is characteristically elevated in Takayasu's arteritis and nonspecific abnormal electrophoretic patterns of protein are seen. Serologic tests and the treponema immobilization test may be of diagnostic value in case of syphilitic arteritis.

Aortography is the diagnostic test of most value, and at present is the only method of accurately demonstrating the site and degree of obstruction. Excellent visualization of the aortic arch and its branches can be obtained by retrograde catheterization of a femoral or uninvolved brachial artery followed by injection of contrast media. This approach is not without hazard, especially in the presence of marked atherosclerotic aortic disease. In the latter instance, right heart catheterization with pulmonary artery injection may

be safer and usually gives roentgenograms of satisfactory diagnostic quality. Visualization of the distal end of a subclavian obstruction and vertebral artery can be obtained by retrograde injection in the brachial artery if desired. X-ray studies, other than angiography, usually have not been helpful. Chest x-ray examination may reveal calcification of vessel walls and tortuosity of involved arteries. Notching of the ribs reminiscent of coarctation of the aorta, may occasionally be seen as a result of dilated intercostal collateral vessels.[7]

Treatment

Medical management has not been demonstrated to be of significant value in most instances. Penicillin may be useful in cases of syphilitic arteritis,[5] and anticoagulants have been recommended in arteriosclerotic disease of the aortic arch as well as in the "basilar artery syndrome." Steroids would theoretically seem to be of value in the idiopathic arteritis of females, but this is difficult to evaluate.

Surgical therapy of atherosclerotic occlusions consists of endarterectomy, endarterectomy and patch graft angioplasty, and bypass graft procedures. These procedures have given satisfactory results in a large percentage of cases[8], but the prognosis is related to site and degree of disease and coexistence of atherosclerotic disease elsewhere. There is little experience in arterial reconstructive surgery in Takayasu's arteritis.

Prognosis

The prognosis depends on the etiology, the site and extent of arterial obtsruction, and the presence or absence of irreversible neurologic disease or associated coronary, renal, or cerebral artery disease. The latter factors are of prime importance in considering the future outlook and surgical treatment in atherosclerotic occlusions. In idiopathic arteritis, there have long been remissions associated with a relatively good prognosis, but the course is usually one of progressive cerebrovascular insufficiency until death occurs.

Summary

Pulseless disease, also known as aortic arch syndrome, Takayasu's disease, Martorell's syndrome, reversed coarctation, brachiocephalic arteritis, and thrombo-obliterative aortic arch disease, is an occlusive process in the great branches of the aortic arch. A clearer understanding of the condition results from consideration of the various causes—the most common being atherosclerosis, syphilitic aortitis, and Takayasu's arteritis. Symptoms and physical findings depend on the location and extent of the vascular obstruction and definitive diagnosis depends on angiographic studies. Arterial reconstructive surgery gives good results in many cases due to atherosclerosis, but treatment is limited by the frequent prescence of associated disease. Prognosis, like treatment, depends upon underlying cause and disease and may vary considerably.

References

1. Davy, J.: Researches, Physiological and Anatomical, v. 1:246, London, 1839. Smith Elder & Co.

2. Shimizu, K., Saro, K.: Pulseless Disease, J Neuropath Exp Neurol., 1:37, 1951.

3. Takayasu, M.: A Case with Peculiar Changes of the Central Retinal Vessels, Acta Soc Ophthal Jap 12:554, 1908.

4. Judge, R. D., Currier, R. D., Gracie, W. A., and Figley, M. M.: Takayasu's Arteritis and the Aortic Arch Syndrome, Amer J Med 32:379, 1962.

5. Caldwell, R. A. and Skipper, E. W.: Pulseless Disease, A Report of Five Cases, Brit Heart J 23:52, 1961.

6. Ross, R. S. and McKusich, V. A.: Aortic Arch Syndromes; Diministed or Absent Pulses in Arteries Arising from the Arch of the Aorta, Arch Intern Med 92:701, 1953.

7. Weir, A. B., and Kyle, J. Warren: Reversed Coarctation, Review of Pulseless Disease and Report of a Case, Ann Intern Med 45:681, 1956.

8. Crawford, E. S. DeBakey, M. E., Morris, G. C., and Cooley, D. A.: Thrombo-obliterative Disease of the Great Vessels Arising from the Aortic Arch, J. Thorc and Cardiov Surg 43:38, 1962.

CASE REPORT*

Unilateral Hyperlucent Lung with Associated Myocardial Disease

John Thomas, M.D., Asghar Davachi, M.D., Edwin Mitchell, M.D., Nashville, Tenn.

Since the report of Swyer and James[1], there have been many articles describing unilateral pulmonary emphysema. However, other descriptive terms such as unilateral transradiancy of the lung[2], unilateral hyperlucent lung[3], unilateral bronchiectasis without atelectasis[4], and hypoplasia of the pulmonary artery[5], have been employed. The syndrome consists of recurrent pulmonary infections, diminished breath sounds and crepitant rales over the involved lung. Roentenograms reveal hyperlucency of the affected lung. Upon bronchoscopy there is no obstruction in the large bronchi, through bronchography reveals the bronchioles to end in blind "nubbins" with puddling of the media to form "nests." Angiocardiographic studies show the pulmonary artery or its branches on the affected side to appear small and the lung to be oligemic. Bronchospirometry reveals a definite decrease in the function of the affected lung[2, 6]. Histologically, there is evidence of old and recent bronchitis and bronchiolitis with bronchiectasis[1]. In the available pathologic specimens, it is surprising to find the pumonary artery on the involved side to be of normal size in most instances.

The purpose of this report is to present a patient with unilateral hyperlucency of the lung, with bronchiectatic lesions involving the entire left lung and the superior segment (existing as an accessory lobe) of the right lower lobe. There is present, in addition, myocardial disease of undetermined eitology. Pulmonary function, cardiac catheterization and cineangiocardiographic studies are presented.

*From the Cardiovascular Disease Clinical Research Program Project and the Departments of Internal Medicine and Radiology, Meharry Medical College, Nashville, Tennessee.

This investigation was supported in full by Public Health Service Research Grant 06349, from the National Heart Institute, National Institutes of Health, Public Health Service.

Case History

A 30 year old negro woman was admitted to the George W. Hubbard Hospital of Meharry Medical College in June of 1963, complaining of severe dyspnea, fatigue, swelling of the abdomen, legs and feet of 4 weeks duration.

The history revealed that as a child she had dyspnea more than usual upon exertion. She denied a history of rheumatic fever. At 3 years of age, she had pneumonia and since then has had numerous infections of the respiratory tract which have required several hospitalizations. Evidence of cardiovascular disease was first noted at the age of 23, when she developed nocturnal dyspnea and edema of the feet. Following digitalization she became asymptomatic. Four years later, in 1960, she was hospitalized for another infection in the respiratory tract. On this occasion, an x-ray of the chest revealed the heart size to be normal but the EKG showed generalized T-wave inversions. A tentative diagnosis of pericarditis and/or myocarditis was entertained. After a month, the EKG returned to normal limits. The respiratory infection responded to antibiotic therapy.

A year later, in Sept. of 1961, she had an uncomplicated full-term delivery. Four weeks postpartum, she was hospitalized for pneumonia of the right lower lobe. In addition to the pulmonary disease, there was a marked increase in the size of the cardiac silhouette (Fig. 1), and

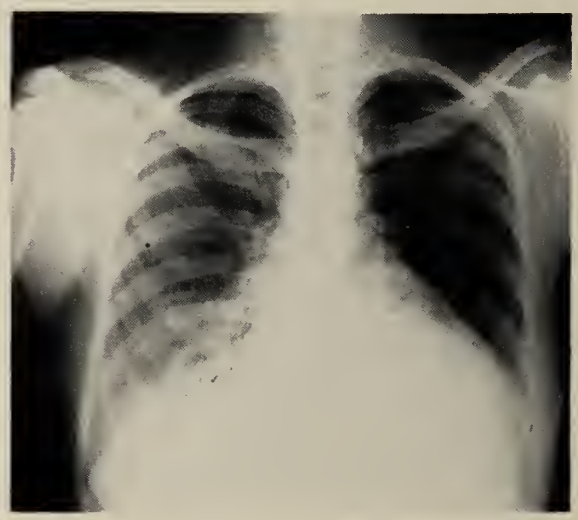


FIG. 1. This shows hyperlucency of the left lung, generalized cardiomegaly and an area of pneumonitis in the right base.

the EKG again showed nonspecific T-wave changes. She responded to therapy with antibiotics. Approximately one year later, in Oct. of 1962, she again was hospitalized for another attack of pneumonia of the right lower lobe. Cardiomegaly was also present. A month later, in Nov., 1962, she had another uncomplicated delivery.

For the next 5 months, the patient was followed in the outpatient clinic. During a routine visit

she was observed to have numerous inspiratory rales over the left lung field and she therefore was hospitalized for study. There was no evidence of cardiac insufficiency. An x-ray film of the chest revealed cardiomegaly, particularly in the region of the left ventricle. The most interesting finding was hyperlucency of the left lung and a review of all previous films revealed the same finding. (Fig. 2.) Bronchograms re-

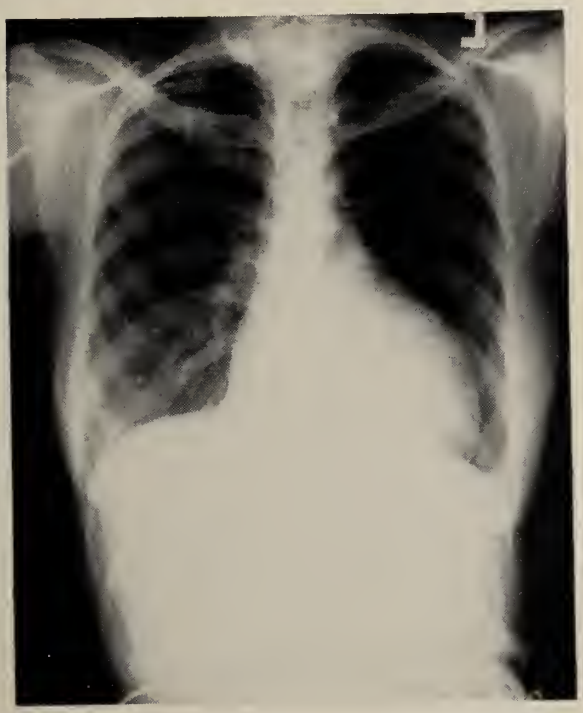


FIG. 2. Two years later. Note the marked decrease in size of the cardiac silhouette, the hyperlucency of the left lung is evident.

vealed saccular bronchiectatic lesions of the peripheral bronchi in most of the left lung. (Fig. 3.) Similar lesions were present in the superior segment of the right lower lobe which existed as an accessory lobe. A 3 cm. cyst which admitted contrast media was also present in the left lower lobe. The EKG revealed non-specific T-wave changes. Following antibiotic therapy she improved and was discharged. She remained well until the onset of the present symptoms, except, for excessive menstrual bleeding.

Examination on this admission (June, 1963) revealed her to appear exhausted and weak. She was very dyspneic. B.P. was 110/80, P. 110, R. 24 and T. (rectal) 99°F. The neck veins were moderately distended while in the sitting position. Auscultation over the left lung revealed the same numerous inspiratory rales as previously. The heart sounds were of poor quality and there was a protodiastolic gallop rhythm; the heart was generally enlarged. The liver was enlarged, tender and extended 4 cm. below the right costal margin. Two plus pitting edema of the legs and feet was present. The arm to tongue circulation time was 19.0 seconds and the venous pressure 175 mm. of water. The hemogram revealed a Hgb. 9 Gm.,

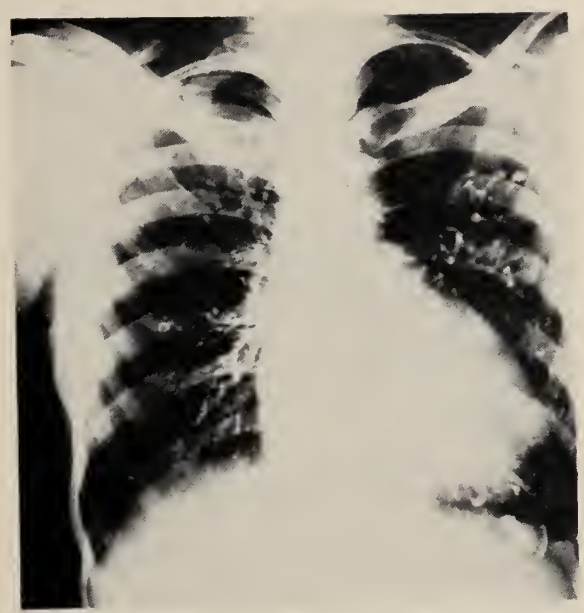


FIG. 3. Bronchogram reveal numerous areas of "nest" formation in the small bronchi of the left lung. Similar areas are present in superior segment of the right lower lobe. Note the cyst in the left lower lobe.

Pcv. of 30%, WBC. count of 8,000 per cu. mm., with P.M.N. 79%; lymphocytes 18% and P.M.E. 3%. Numerous blood and urine cultures were negative. The sputum was negative on smear and culture for acid-fast organisms. The bone marrow study was compatible with iron deficiency anemia. The liver function studies were normal. X-ray film of the chest revealed pneumonia of the right lower lobe and generalized cardiomegaly. The characteristic hyperlucency of the left lung was present. The EKG showed left ventricular hypertrophy. (Fig. 4.) The T-wave changes

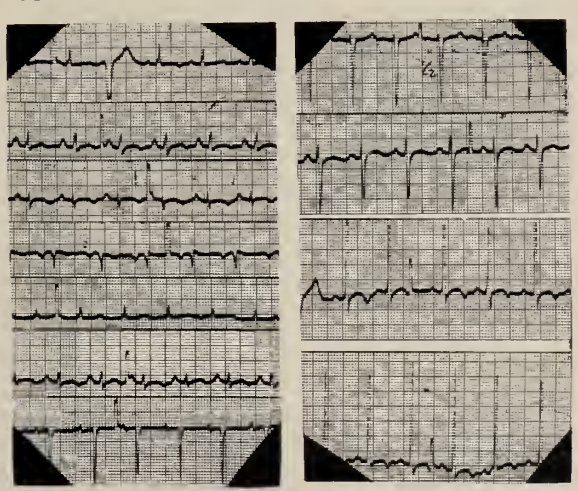


FIG. 4. This shows left ventricular hypertrophy and the T-wave changes suggestive of ischemia.

remained the same as in the previous tracing.

The patient responded to digitalization, diuretics, antibiotics and iron therapy orally. The anemia was apparently secondary to functional uterine bleeding. When she became asymptomatic,

right heart catheterization and cineangiocardiographic studies were performed. The intracardiac pressures were normal as well as the pulmonary artery pressure. Cineangiocardiographic studies revealed the secondary and tertiary branches of the left pulmonary artery to be markedly diminished in size and the left lung was oligemic. (Fig. 5.)



FIG. 5. Cineangiogram. Note the decreased concentration of the dye in the branches of the left pulmonary artery as compared with the right. The lung is oligemic.

5.) Pulmonary function studies were indicative of combined restrictive and obstructive ventilatory insufficiency. (Table 1.)

The patient is now being followed in the cardiac clinic where she receives maintenance digitalis and intermittent antibiotic therapy. She has dyspnea on minimal physical exertion.

Discussion

Two hypothesis have been emphasized concerning the etiology of hyperlucent lung.[3] One maintains that the syndrome in congenital and represents primary hypoplasia of a main branch of the pulmonary artery with bronchiectasis resulting from superimposed infections. The main objection to this is the finding of pulmonary arteries of normal size at operation or in pathologic specimens. The other hypothesis postulates that the primary abnormality is an acquired obstructive process in the small peripheral bronchi, the emphysema being due to numerous check-value mechanisms. This is supported in some instance by the history of aspiration of foreign bodies prior to the onset of the disease, with subsequent repeated pulmonary infections.

The discrepancy between the size of the affected pulmonary artery on angiocardiography and at operation or upon pathologic examination is due to the hemodynamic changes associated with the development of pulmonary collateral circulation. This consists mainly of marked enlargement of the bronchial arteries and their anastomosis with the pulmonary arteries. The object of this collateral circulation, which frequently occurs in chronic pulmonary disease,[7] is to block the inflow of unoxygenated pulmonary arterial blood to the affected lung, thus helping to maintain a normal arterial oxygen saturation. Studies of blood oxygen saturation at various sites along the pulmonary artery during operation for removal of a destroyed lung

Table 1

PULMONARY FUNCTION STUDIES

Ventilatory			*Arterial Blood Gases*		
Subject	Patient*	Predicted Normal		At Rest	After Exercise†
Respiratory rate	12 per min.		pH	7.44	7.36
Tidal volume	350 cc.	400 cc.	PO_2	85 mm. Hg.	72 mm. Hg.
Inspiratory capacity	1000 cc.	2050 cc.	PCO_2	42 mm. Hg.	52 mm. Hg.
Expiratory reserve volume	600 cc.	1030 cc.			
Vital capacity	1505 cc.	3080 cc.			
Residual volume	2130 cc.	1100 cc.			
First-second vital capacity	53%	>75-80%			
Third-second vital capacity	70%	>95%			
Maximum breathing capacity	30 L/m	114 L/m			

*Body surface area is 1.6 (meter)^2

†Standard Masters Exercise Test

NOTE: Single breath nitrogen test showed emptying rates and a rise of 6.7 per cent nitrogen between 750 and 1250 cc. expired volume. (Normal 1.5 per cent rise or less)

here showed that there was a retrograde flow of blood from the bronchial artery to the pulmonary arteries.[8, 9] At angiography in these instances most, if not all, of the dye flows to the normal lung. Thus, there appears to be agenesis or hypoplasia of the pulmonary artery on the affected side, though in reality, it is filled with arterialized blood flowing from the bronchial arteries.

On bronchography in our case, bronchiectatic lesions characteristic of the syndrome were found to be extensive in the left lung but only in the superior segment of the right lower lobe.

The relationship of the myocardial involvement in this patient is not clear and has not, to our knowledge, been associated with the syndrome. The changes in the size of the cardiac silhouette and the T-wave changes suggested a pericarditis at one time. However, the onset of the left and right ventricular failure would indeed seem to indicate myocardial involvement. There is no evidence for constrictive pericarditis; the response to digitilization would also support this. Some of the episodes of failure occurred following pregnancy and thus the possibility of "postpartum heart disease" exists. The possibility of viral myocarditis and primray myocardial discase must also be considered. Indeed, the presence of an extensive collateral circulation involving bronchial and pulmonary arteries, if present, could exert the effect of an arteriovenous fistula and lead to cardiac insufficiency.

Summary

A patient with a unilateral hyperlucent lung but with bilateral bronchiectatic lesions has been presented. The syndrome was complicated by cardiomegaly and congestive heart failure of unknown etiology. Cardiac catheterization, cineangiographic and pulmonary function studies were presented. The intracardiac and pulmonary artery pressure were normal. Cineangiocardiography revealed the branches of the left pulmonary artery to be of small calibre and the left lung oligemic. The pulmonary function studies were characteristic of both restrictive and obstructive ventilatory insufficiency.

Acknowledgment. The authors express sincere appreciation to Drs. L. Ramsey and J. Snell of Vanderbilt University School of Medicine for performing the pulmonary function studies.

References

1. Swyer, P. R. and James, G. C. W.: A Case of Unilateral Pulmonary Emphysema, Thorax 8:133, 1953.

2. Darke, C. S., Chrispin, A. L. and Snowden, B. S.: Unilateral Lung Transradiancy, A Physiological Study, Thorax, 15:74, 1961.

3. Rakower, J. and Moran, E.: Unilateral Hyperlucent Lung, Amer J Med 33:864, 1950.

4. Vaughan, B. F.: Syndrome Associated with Hypoplasia or Aplasia of One Pulmonary Artery, J Fac Radiologist 9:161, 1958.

5. Belcher, J. R., Patterson, J. N. and Smart, J.: Hypoplasia of the Lobar Pulmonary Arteries. A Report of Three Cases, J Thorac Cardiov Surg 34:357, 1957.

6. Dornhorst, A. C., Heaf, P. J. and Semple, S. J. G.: Unilateral Emphysema, Lancet 2:273, 1957.

7. Liebow, A. A., Hales, M. R. and Lindskog, G. E.: Enlargement of the Bronchial Arteries and their Anastomosis with Pulmonary Arteries in Bronchiectasis, Am J Path 25:211, 1949.

8. Gilroy, J. C., Wilson, J. H. and Marchand, P.: Observations on the Hemodynamics of the Pulmonary and Lobary Atelectasis, Thorax 6:127, 1951.

9. Rosenbury, J. G. and Deenstra, H.: Bronchial Pulmonary Vascular Shunts in Chronic Pulmonary Affections, Dis Chest 26:664, 1954.

STAFF CONFERENCE

Nashville General Hospital*

Coarctation of the Abdominal Aorta

DR. JOHN L. SAWYERS: The patient for discussion today has an unusual condition—coarctation of the abdominal aorta. The case will be presented by Dr. Gustafson.

DR. ROBERT GUSTAFSON: *Present Illness:* This is the first admission of a 39 year old colored man to the Nashville General Hospital, admitted with a chief complaint of pain in his legs. He had been in good health until 5 months previously when he began to have pain in the tips of his toes upon prolonged standing. Recently the pain has increased to involve the posterior aspect of the right thigh and the lateral aspect of the left thigh. The pain is aggravated by exercise and may last several days unless he can obtain a long period of rest. He has been in bed for the past 3 weeks and has remained asymptomatic while at rest. There has been no pain in the buttocks nor has he been impotent. He has noticed patchy areas of darker pigmentation on his legs, but has had no swelling nor ulcerations.

Past History: This revealed that he had had syphilis adequately treated at the County Health Department. Three years ago a right inguinal herniorrhaphy was done without difficulty. He is allergic to penicillin. The family history was noncontributory.

Physical Examination: The patient was a well developed, well nourished colored man in no acute distress, having a B.P. of 125/80, P. 80, R. 22 and T. of 99°. The heart was not enlarged and the rhythm was regular; there were no cardiac murmurs, nor carotid bruits. A systolic murmur was heard over the umbilical area, transmitted down both iliac arteries There was no abdominal tenderness, and no masses or enlarged viscera could be palpated. Rectal examination was negative. The upper extremities and pulses were normal to examination; the hair was sparse over the lower extremities. There was no edema, nor clubbing of the nails. Capillary and venous filling were not delayed. The femoral, dorsalis pedis and posterior tibial pulses were markedly diminished bilaterally and graded as 1 +. No popliteal pulse could be felt. Oscillometric readings in the lower extremities were equal in both legs but diminished, being 1 unit in the thighs and 2.5 in each calf. The neurologic examination revealed no abnormalities.

The *laboratory studies* revealed a PCV. of 49, WBC. count of 6,500 and a normal urinalysis. All blood chemical tests were normal. The cholesterol was 193 mg. for 100 ml. VDRL was reactive in a dilution of 1:2. The ECG. showed a sinus rhythm with a low T-wave in leads 1, 2, aVL and V6. The T-wave in V4 and V5 was inverted. The tracing was otherwise normal.

DR. CLIFTON GREER: X-ray examinations of the chest showed the heart, lungs and great vessels to be normal. There is no evidence of rib notching.

A translumbar aortogram was done by members of the Surgical Service and is shown in figure 1. There is narrowing in the distal aorta just above the iliac bifurcation which suggests a plaque. No other plaques or abnormalities are noted in the abdominal aorta, iliac and femoral arteries.



FIG. 1. The translumbar aortogram reveals a narrowing in the distal aorta just above the iliac bifurcation. This was found to be the site of coarctation.

DR. SAWYERS: The patient was taken to the operating room for exploration of the abdominal aortic stenosis. The site of constriction in the aorta and a bruit could be palpated about 4 centimeters above the aortic bifurcation. When the aorta was opened, we found that the narrowing was due to a diaphragm-like opening caused by marked initimal thickening. No gross atheromatous changes were evident. Except

*From Department of Surgery, Nashville General Hospital, Nashville, Tennessee.

for this area of coarctation the abdominal aorta appeared normal. Endarterectomy of this area was easily performed. The patient tolerated the procedure without difficulty. The femoral and pulses of the lower extremity returned to normal volume immediately. Oscillometric readings a few days later revealed 3.5 in the thighs and 6.0 in the calf. His symptoms of leg pain have disappeared.

VISITING PHYSICIAN: What were the blood pressure measurements in the legs?

DR. GUSTAFSON: Following operation the pressure in the right leg was 140/100 and 160/100 in the left leg. The simultaneous arm pressures were 122/82 on the right and 118/78 on the left.

DR. DeMONBREUN: The markedly narrowed lumen in the surgical specimen measured 0.3 cm. in diameter. Microscopic section section showed this small lumen to be lined by a layer of endothelial cells. The wall is composed of loosely arranged myxoma-like cells. The Pathology Department made a diagnosis of coarctation of the abdominal aorta.

DR. SAWYERS: Coarctation of the aorta is usually localized to the distal aortic arch or isthmus. The lesion is found at or just below the ductus arteriosus but may consist of a more diffuse stenosis in the arch of the aorta lying usually between the left subclavian and the ductus arteriosus. Dr. Abbott found coarctation of the aorta localized to this area in all but 2% of the cases she studied[1]. The surgical treatment of coarctation in the upper aorta was introduced independently by Crafoord and by Gross in 1945. Recently interest has been aroused in the treatment of the rare subisthmic type of aortic stenosis.

To properly plan for the surgical treatment of these unusual lesions, the surgeon must know the precise location and extent of the stenosis. This may now be done by aortography. Routine aortography in all cases of coarctation is not necessary, but it is certainly essential in stenosis distal to the ductus arteriosus.

Dr. DeBakey's group[3] has recently reported on 21 cases of aortic obstruction involving the lower thoracic aorta and the abdominal aorta above the bifurcation. They classified the lesions into three levels: (1) the lower thoracic aorta—4 cases, (2) upper abdonimal aorta—3 cases, and (3) lower abdominal aorta—14 cases. Treatment consisted of resection with graft replacement in most of the lower thoracic lesions, by-pass grafting for the upper abdominal aortic stenosis, and usually endarterectomy for lesions of the lower abdominal aorta.

The primary aim of surgical therapy is to restore normal circulation through the aorta. In 1949, Bahnson[2] reported 2 cases in which sympathectomy was performed. These patients were only slightly improved. Since 1951 excellent results have been reported in 29 patients who have undergone resection of the stenotic area, by-pass or endarterectomy.

The first case of abdominal aortic stenosis below the origin of the renal arteries was reported by Power in 1861. We have found reports in the English literature of 21 cases of coarctation of the lower abdominal aorta in which surgical treatment was done. Coarctation in this area is seldom associated with extreme attenuation of the outer diameter of the aorta. The stenosis usually results from an acquired process rather than a congenital lesion. There is usually extreme thickening of the intima as seen in the case presented today. Morris and associates[3] describe stenosis in this area as due to a lesion that resembles ordinary arteriosclerotic thrombo-obliterative disease that is atypical only by virtue of its localization. The aortic bifurcation and iliac arteries are peculiarly uninvolved and appear normal, as we found in our patient.

The history of syphilis in this patient is intriguing as a possible etiologic factor, but is not substantiated by histologic evidence and is probably an incidental finding. Atherosclerosis appears to be the underlying pathologic process in these patients and is unusual only because of its localized level of development. Even in young individuals the etiology is usually arteriosclerosis praecox rather than a congenital coarctation of the abdominal aorta.

It is important to remember that coarctation may occur in an unusual location. There have been reports of patients with aortic occlusive disease in the lower abdominal aorta who have been mistakenly

explored through the chest for isthmic aortic stenosis. Coarctation in the usual site is associated with a systolic bruit over the posterior chest. Absence of such a murmur and absence of notched ribs should arouse suspicion of a subisthmic stenosis. An abdominal systolic murmur and a history of claudication in the legs are frequent positive findings in abdominal coarctation. Aortography by translumbar or retrograde femoral catheterization provides accurate diagnosis of the location and extent of the coarctation. Endarterectomy of the stenotic area has proven to be an effective method of surgical treatment for abdominal aortic coarctation arising below the renal arteries.

References

1. Abbott, M. E.: Coarctation of Aorta of Adult Type: Statistical Study and Historical Retrospect of 200 Recorded Cases with Autopsy, of Stenosis or Obliteration of Descending Arch in subjects Above Age of 2 Years, Am. Heart J. 3:574, 1928.

2. Bahnson, H. T., Cooley, R. N., and Sloan, R. D.: Coarctation of the Aorta at Unusual Sites, Am. Heart J. 38:905, 1949.

3. Morris, George C., Jr., DeBakey, M. E., Cooley, D. A. and Crawford, E. S.: Subisthmic Aortic Stenosis and Occlusive Disease, A.M.A. Arch. Surg. 80:87, 1960.

SAFE, ROUTINE PERIPHERAL ANGIOGRAPHY IN A LARGE CITY HOSPITAL. Domingo, R. T., Schaefer, H. C., Fries, C. C., Sawyer, P. N. and Wesolowski, S. A., J. Cardiovasc. Surg. 5:131, 1964.

The authors, who have had an extensive experience with arteriography dating back many years, prefer to do all their peripheral arteriography under local anesthesia. This includes even percutaneous lumbar aortograms which many surgeons have been willing to do only under general anesthesia. The contrast medium employed is Hypaque in a 50 or 75% concentration, limiting the total amount of medium to 120 cc. The authors used single film exposure with repeat injections for visualization of more peripheral areas, rather than the more extensive multiple cassette, rapid film changing equipment often employed. Their technic for aortography includes the preliminary injection of 10 to 20 cc. of contrast medium to ascertain the needle's position as well as for preliminary visualization. This safeguard is generally agreed to by the authors, as well as surgeons throughout the country, as being of very great importance to safe aortography. The authors' technic then includes the slow injection of an additional 50 cc. of medium to visualize the more peripheral arterial tree with varying degrees of delay for visualization of distal vessels as far away as the distal calf and the foot. A total of 349 arterial visualizations in all sites has been done over a two and one-half year period without any fatality or serious complication. These results speak well for the care with which the authors' technic has been evolved.

Phlebography is performed in a manner which has become routine in most centers; the semi-erect position being used to insure satisfactory visualization. Fifty cc. of 50% Hypaque is used, timing not being critical as it is with arterial visualization. The injection is made into the foot whenever possible and tourniquets are avoided in contrast to the procedure used by many others.

It is to be emphasized that attention to detail in obtaining angiographic visualization is of the utmost importance not only for obtaining diagnostic films but, also, for the safety of the patient. The authors success in both these areas is noteworthy. (Abstracted for the Middle Tennessee Heart Association by Malcolm R. Lewis, M.D., Nashville.)

CLINICOPATHOLOGIC CONFERENCE

Methodist Hospital*

Bile Duct Carcinoma

This 40 year old white salesman was first admitted to this hospital on Oct. 3, 1963, complaining of nausea, loss of appetite and malaise. He had had diarrhea 4 weeks previously after an excessive intake of food. Two weeks before admission he noted light colored stools and dark colored urine, and a change in the "color of his eyes." Past history was not remarkable. Physical examination on admission revealed a T. of 99.6°, P. 80, R. 20, and B.P. 118/80. The examination is recorded as negative except for marked icterus and enlargement of the liver to the level of the umbilicus, the liver being slightly tender. No rectal examination was done.

Admission laboratory data included a Hgb. of 16.7 Gm. PCV. of 47% with icteric plasma. WBC. count was 12,250 with 56% P.M.N., 3% P.M.E., 39% lymphocytes and 2% monocytes; platelets were adequate. ESR. was 28 mm./hr. The urine was reddish-brown and slightly cloudy, with a sp. gr. of 1.020; 2+ albumin; 2-3 WBC., 1-2 RBC., and 0-1 finely granular casts per h.p.f.; test for bile was positive. BUN was 17 mg.% and a cephalin flocculation test was negative.

In the hospital the stool color returned to normal. By Oct. 10 the liver seemed to be smaller and nontender. Despite a T. of 99.3, the patient was discharged to be followed as an out-patient. Hospital treatment included oxytetracyeline, 500 mg. t.i.d. and bed rest. This was discontinued on Oct. 8, but on discharge the patient was given a prescription for 28 capsules of oxytetracyeline to begin on Oct. 10.

The patient was readmitted on Nov. 19, 1963. During the interim gastrointestinal x-ray studies had been done and were interpreted as normal. For the week prior to re-admission, the patient had noted increased nausea and vomiting with the recurrence of light colored stools and dark urine. At this time it is stated there was no history of exposure to disease or hepatitis, nor recent injection or transfusion. The patient also complained of excessive itching. The liver had not decreased in size during the previous 3 weeks. There had been a 15 lb. weight loss with the present illness.

Physical examination revealed a few questionable spider angiomas on the shoulder and anterior chest; palms were erythematous. T. was 98.8°, P. 80, R. 24, B.P. 118/70. The sclerae were icteric. In general the findings were normal. The abdomen was somewhat obese but flat and soft. The liver was palpable 3 fingers below the costal margin, smooth and firm, but slightly tender on firm pressure. No other masses were palpated and bowel sounds were normal. The external genitalia were normal as was the rectal examination.

Admission laboratory studies included a Hgb. of 14 Gm., PCV. of 44% (icteric plasma); WBC. count of 8,950 with 65% P.M.N., 1% P.M.E., 20% lymphocytes, 12% monocytes. The red cells showed slight anisocytosis and there were occasional target cells. Urinalysis revealed a sp. gr. of 1.020 with a trace of albumin, negative for sugar, and 0-3 WBC. per h.p.f. Ictotest was positive. BUN on Nov. 7 was 11 mg.%. Cephalin flocculation test was negative at 48 hours. Prothrombin time was 12.5 sec. with a control of 14.1 sec. Other laboratory data appear in the table.

The patient was given diphenhydramine (Benadryl) and subsequently trimeprazine (Temeril) for itching. On Nov. 11 the jaundice appeared to be somewhat decreased. On Nov. 16 the patient had diarrhea which was treated with paregoric. On Nov. 18 the prothrombin time was 11.5 sec. with a control of 13 sec.; cholesterol was 842 mg.% with cholesterol esters 627 mg.%. Vitamin K (Synkayvite) 5 mg. IM b.i.d. was begun. On Nov. 20 serum proteins were 7.3 Gm. total with 4.4 Gm. of albumin and 2.9 Gm. of globulin. On Dec. 3 prothrombin time was 14.2 sec. with a control of 12.4 sec.; 2 days later the patient had 12.5 sec. and the control was 12.7 sec.

Although it was thought the prime disease was intrahepatic, the lack of appreciable clinical improvement suggested surgical exploration to rule out extrahepatic obstruction. Preoperatively sodium was 140, potassium 4.6, and chlorides 106 mEq/L. On Dec. 6 exploratory laparotomy, under general anesthesia, showed a large, green and smooth liver; the gallbladder and common duct were described as flat with no bile. The liver biopsy was reported as "biliary cirrhosis of liver." A subsequent progress note indicates that "the changes were compatible with cholangiolitic hepatitis."

On Dec. 13 the Hgb. was 7.6 Gm.%, PCV. 32%, WBC. count 28,800 with 5% bands, 80% P.M.N., 4% myelocytes, 1% blasts, 1% progranulocytes, and 9% monocytes. Platelets were adequate. There was slight hypochromia, moderate anisocytosis, macrocytosis, microcytosis and spehrocytosis of the red cells. He was given 2 units of whole blood. On Dec. 12 the wound disrupted to the anterior fascia, the posterior fascia remaining intact. This was repaired under local anesthesia. Prothrombin time determinations on Dec. 13 and 14 were again normal. Repeat hematologic studies on Dec. 14, revealed a Hgb. of 12.9 Gm., PCV. 38%; WBC. count 26,700 with 79% P.M.N., 3% myelocytes, 11% lymphocytes, and 7% monocytes. There were 4 nucleated RBC. per 100 WBC. cells. By Dec. 16, the WBC. count was 41,250 with 6% bands, 70% P.M.N., 0-5% P.M.E., 0.5% P.M.B., 8% lymphocytes, 1% monocytes, 9.5% metamyelocytes, 4% myelocytes, and 0.5% progranulocytes. There were 8 nucleated RBC. per 100 WBC. Urinalysis on Dec. 16 revealed a sp. gr. of 1.009 with 1+ albumin, 4-5 WBC., 2-8 RBC., and many

*From the Departments of Medicine and Pathology, Methodist Hospital, Memphis, Tennessee.

coarsely granular, a few epithelial, and rare waxy casts. Calcium phosphate crystals were also noted. On Dec. 18 BUN was 25 mg.% and serum ammonia was 244 micrograms%. On Dec. 19 the patient had a slight nosebleed, but in general was alert and in good spirits. On Dec. 17 tetracycline 250 mg. q.i.d. was begun and on Dec. 19 Synkayvite was increased to b.i.d. Prothrombin time on Dec. 18 was 14.1 sec. with a control of 12.3 sec. and on Dec. 21 was 17.6 with a control of 14.5 sec. Urine culture on Dec. 17 yielded a Staph. albus, coagulase negative. On Dec. 21 WBC. count was 31,000 with 8% bands, 2% myelocytes, 5% metamyelocytes, 69% P.M.N., 1% P.M.E., 8% lymphocytes, and 6% monocytes. There were 12 nucleated RBC. per 100 WBC. One unit of whole blood was given on Dec. 23.

On Dec. 24 right shoulder pain developed with subsequent radiation to the epigastrium and lower abdomen, accentuated by respiration. The patient had had nausea and retching the previous night. Examination revealed a B.P. of 130/80, P. 88; the lungs were clear, heart negative, tenderness in the upper abdomen but no rebound tenderness, and bowel sounds were hypoactive. On Dec. 24 sodium was 133, potassium 4.6, chloride 103, Eq/L and BUN 100 mg.% The patient received another unit of blood on Dec. 24. The next day excessive bleeding from needle punctures was noted, and slight bleeding from the nose and mouth. Abdominal pain had decreased but there was continuing moderate abdominal distention. That night the patient developed a faint and weak pulse and B.P. became unobtainable; respirations became very slow and gasping. Five mg. of metaraminol (Aramine) produced no reaction. The patient was pronounced dead at 2:20 A.M. on Dec. 26, 1963.

During the entire hospital stay the temperature was at or below 98.6 except for the four days after liver biopsy. At this time the peak value was 99.6. Electrocardiograms on Dec. 4 and again on Dec. 24 were interpreted as within normal limits.

Certain Laboratory Data

Date	*Bilirubin*					
	Total mg.%	Direct mg.%	Alk. Phos. K-A units	SGPT units	SGOT units	Steroid Therapy Ordered
Oct. 4	16.7	8.3				
Oct. 8	18.9	7.6				
Nov. 7	32.0	17.0	78	110	100	
Nov. 8						Prednisone, 10 mg. q.i.d.
Nov. 11	20.9	9.2	47			
Nov. 17	26.0	14.4	122			
Nov. 18			146	500		
Nov. 19						Prednisone, 5 mg. q.i.d., ACTH 40 units b.i.d. I.M.
Nov. 21	22.1	10.9				
Nov. 23						Prednisone, 5 mg. b.i.d.
Nov. 25	36.0	14.4	170			Prednisone, 5 mg. daily.
Nov. 26						Discontinue ACTH
Nov. 27	23.5	9.0		590	280	Prednisone, 15 mg. q.i.d.
Dec. 1	27.5	13.9	190			
Dec. 3						Prednisone, 10 mg. q.i.d.
Dec. 6						Discontinue Prednisone. Cortisone 100 mg. Solucortef 100 mg. I.V. x 3
Dec. 7						Cortisone, 15 mg. q6h
Dec. 9	33.0	24.0	225			
Dec. 10						Discontinue Cortisone. Prednisone, 15 mg. q.i.d.
Dec. 12	30.8	17.7	173			
Dec. 16	62.0	36.2	174			Prednisone, 10 mg. q.i.d.
Dec. 23	99.5	54.5				

Discussion

DR. STEFFEE: I think most of you have had time to glance through the protocol and I shall not read it. Obviously, this is a patient with jaundice, as you can tell by looking at the December 23rd total bilirubin of 99.5 mg.%. Without further ado, I shall turn this session over to Dr. Witherington.

DR. WITHERINGTON: There are four general points I should like to make in the differential diagnosis of patients presenting with jaundice. First, is to emphasize the value of the history and physical findings in making the diagnosis. The laboratory data and liver function studies are often confusing since the liver has so many functions. Second, our prime objective is to determine whether the obstruction is intrahepatic or posthepatic. If we believe it is reasonably certain that it is posthepatic, the patient deserves surgical exploration. Third, it is no sin to operate to make a correct diagnosis if it cannot be made otherwise, after a reasonable time and the patient's condition and jaundice are worsening. Fourth, I should like to mention the help we have recently received from isotope scanning of the liver. We have had 3 patients with liver tumors beautifully demonstrated by a scan. One was a jaundiced patient with a lesion obstructing the hepatic ducts.

The case at hand is the sad story of a 40 year old salesman who became ill in mid-September 1963, and died on December 26, 1963, an illness of a little better than 3

From the Executive Director

MEDICAL DIGEST

News of Interest to Doctors in Tennessee

AMA House of Delegates' Actions San Francisco, California—June 21-25

San Francisco Eelection Story—Big News for Tennessee

● Tennessee stepped into the winners circle at the 113th Annual Convention of the American Medical Association, when the House of Delegates elected two Tennessee delegates to high offices of the AMA.

Dr. Alvin J. Ingram Named to Board of Trustees

● Aided by an all-out effort by the Tennessee delegation, Dr. Alvin J. Ingram, Memphis, was elected to a three-year term on the Board of Trustees of AMA. Dr. Ingram was elected over the favored incumbent.

Dr. Charles C. Smeltzer Named to Judicial Council

● Dr. Charles C. Smeltzer, Tennessee's Senior Delegate from Knoxville was elected to a five-year term on AMA's Judicial Council.

All Tennessee physicians should be extremely proud of its AMA delegation and the highest positions of leadership in which two of its representatives were placed.

House of Delegates' Actions

● Tobacco and Health, Human Rights, Physician-Hospital Relations, A proposed AMA dues increase, Continuing Medical Education, The Cost of Medical Care, and Federal Subdization of Prepayment Plans and Health Insurance Companies, were among major subjects acted upon by the AMA House.

Dr. Donnavan F. Ward of Dubuque, Iowa, was named President-Elect of the Association.

Tennessean Given Goldberger Award

● Another Tennessean, Dr. William J. Darby of Nashville, Vanderbilt University School of Medicine, was the recipient of the Joseph Goldberger Award in Clinical Nutrition. This is one of the three highest awards given by the AMA.

Registration figures at the meeting reached 49,437, including 14,229 physicians.

Dues Increase Proposed

● Dr. Edward R. Annis, retiring AMA President, called for an increase in dues to meet the expanding needs of the Association. The House referred the question to the Board of Trustees for study.

Tobacco and Health

● The House approved a strong stand on tobacco and health by calling cigarette smoking "a serious health hazard". The House stated that "AMA is on record and does recognize the significant relationship between cigarette smoking and the incidence of lung cancer and certain other diseases."

Human Rights

● On the issue of human rights the House declared itself "Unilaterally opposed to the denial of membership, privileges and responsibilities in county medical societies and state medical associations to any duly licensed physicians because of race, color, religion, ethnic affiliation, or national origin." The House called upon all state medical associations, all component societies and all individual members of the AMA to exert every effort to end every instance in which such equal rights, privileges, and responsibilities are denied.

Physician-Hospital Relations

● Conclusions and recommendations in an extensive report on physician-hospital relations were adopted. The report stresses "the imperative need for the medical profession to assume responsibilities for the quality, continuity, and availability of professional services and for the coordination of these services with other essential supportive aspects of health care." The reports recommendations are designed to serve as guidelines for physicians in meeting the problems involved in the changing patterns of such care as: Appointment of salaried chiefs of staff; salaried heads of clinical departments; salaried directors of medical education; employment of salaried physicians for out-patient and emergency departments; use of salaried physicians to provide care ordinarily provided by interns and residents; and utilization of closed panel prepayment medical care programs by hospitals.

Cost of Medical Care

● A full volume report of the AMA Commission on the cost of medical care was received by the delegates. The recommendations of the Commission will be studied and a report will be made to the House for consideration at its 1964 Clinical Convention. The four volumes include a general report on factors involved in medical care cost, a report on "Professional Review Mechanisms, Significant Medical Advance, and Changing Patterns of Hospital Care."

Other Major Actions

● Delegates reaffirmed the AMA policy favoring federal grants for construction and renovation of medical schools, hospitals, related institutions and mental health centers.
——Opposed Federal subsidization of prepayment plans and health insurance companies and recommended that AMA study development of state programs utilizing prepayment plans of Health insurance companies in the implementation of state programs of medical aid to the aging under the Kerr-Mills law.
——Rejected a proposal to poll all AMA members concerning compulsory social security for self-employed physicians.
——Endorsed an expanded program on medical ethics. The program will be designed to educate physicians and the public on what medical ethics means to them.
——A three-point communications program designed to improve the public relations position of the medical profession was endorsed on recommendation of the AMA Committee on Communications. The program includes a redoubling of efforts by county and state societies, closer liaison with media personnel, and prompt information to state societies on AMA news releases and testimony.
——A national conference on areawide planning of hospitals was authorized, to be sponsored under auspices of the AMA. Delegates also supported a position statement on protecting children against physical abuse and called for legislative guidelines on this matter. (Tennessee already has a law on the books.)
——The House recommended that the Board of Trustees use the talents of Dr. Edward R. Annis, immediate past president, for medicine with appropriate remuneration. The Board of Trustees was asked to investigate establishment of a wire communication system between the AMA headquarters in Chicago and offices of all state medical associations.

TMA Employs New Administrative Assistant

● Mr. B. D. (Bob) Berry formerly of Duncan, Oklahoma, is the new administrative assistant on the TMA staff, replacing Mr. Gene Hensley who resigned last January. Mr. Berry began his duties on May 15th. (See "Announcements" Section in this issue of the Journal.)

Public Service

Hadley Williams, Public Service Director



● The Tennessee Medical Association will mark the second observance of Community Health Week next October 18-24. Each county medical society is being urged to cooperate with local allied health groups in planning and presenting community activities appropriate to the occasion.

The primary goal of Community Health Week, as envisioned by the House of Delegates of the American Medical Association in authorizing the program at its 1962 Clinical Convention, is to focus public attention, at the community level, on the health progress and medical advances that have been made. The accent should be on the quality of each community's health services and facilities.

The first observance of Community Health Week last year was on a very limited basis but was successful. This program will continue to grow in significance and appeal yearly.

Each secretary of Tennessee's 49 county medical societies has been mailed a complete and comprehensive Community Health Week promotion kit from AMA headquarters. The kit is designed to serve as the backbone of publicity for the program and it contains news releases patterned around community health week along with suggestions for other stories which can be developed locally; a series of seven daily newspaper feature columns which can be bylined by the president of the local medical society; a series of five editorial suggestions for local newspaper editors; television spot announcements complete with slides; radio spot announcements; suggested speech material suitable for local use, ministerial announcements and many other invaluable materials.

The Public Service Committee of TMA strongly urges each county medical society to implement fully as many phases of Community Health Week as possible. Dr. R. A. Calandruccio, of Memphis, Chairman of the committee, in commenting on the program, said, "Observance of Community Health Week throughout Tennessee is a positive and productive public service project that should be consciously implemented in every community."

"The future of American medicine hinges upon the opinions the public holds about our medical care system and medical men," Dr. Calandruccio further stated, "and Community Health Week affords us the opportunity to tell the story of enormous progress in the health field and of the new achievements and conquests that are occurring step by step, almost daily."

By dramatizing the facts that existing medical and health services are the fruits of community teamwork and planning in past years and stressing that it is the responsibility of each citizen, working with his neighbors, to help plan now for tomorrow's needs, Community Health Week can serve as an inspiring guide to community action.

Plans for observance of Community Health Week, October 18-24, in all county medical societies should be made now!

Public Service Committee Meets

● The highlight of a recent meeting of the Communications and Public Service Committee was a presentation by Mr. Jim

Hickox, Program Services Director of the American Medical Association, of public service programs and materials available through AMA.

Long-range plans of the committee adopted at the meeting include distribution of a film series on various medical topics to all television outlets, sponsorship of training courses for county speakers bureaus, re-distribution of the AMA Public Relations Manual to all county medical societies, stimulation of county societies to utilize professionally designed advertisements in local newspapers and a campaign urging individual physicians to display in their waiting rooms health information materials.

Individual letters to every TMA member will be mailed in the near future informing them of the committee's expanded public service activities and urging their cooperation.

Council Supports Direct Lab Billing

● Laboratory work should be billed directly to the patient, said the American Medical Association's Judicial Council in an opinion. The Council stated that a physician should bill the patient directly for professional services rendered and when two or more physicians, actually and in person, render service to one patient, they should render separate bills.

The new opinion adopted by the Council says: 1) The practice of pathology is an integral part of the practice of medicine; 2) All physicians should bill their patients directly; and 3) Where it is not possible for a laboratory to bill a patient directly, the billing to a patient should truly reflect the charges made for the analytical services and those for professional services.

The Judicial Council recommended that laboratory work be billed directly to the patient by the laboratory performing the tests. If this is not possible, the physician's bill should be itemized so that the patient knows the amount he is being charged for each laboratory test, as well as how much he is paying for the doctor's professional services.

Facts About Physicians

● There are currently 278,275 physicians in the United States. This total includes 19,660 retired physicians, 2,752 not in medical practice, 21,914 in United States Government Service and 3,133 who are in foreign countries or whose addresses are unknown, according to the University of Chicago Health Information Foundation.

By activity, 63 per cent are in private practice, 17 per cent in hospital service, 4 per cent in teaching or administrative or research, 2 per cent in laboratory or preventive medicine, 8 per cent in Federal Government Service, and the remaining 6 per cent are not in practice or not in the country.

The ratio of all physicians to the total population remained rather constant at about 136 per 100,000 including armed forces abroad, from 1940 to 1960. The ratio of active physicians outside Federal Government to civilian residents is 127.5 per 100,000.

In 1931, about 86 per cent of all physicians were private practitioners. By 1949 the proportion decreased to 75 per cent and today it is down to 63 per cent. As a proportion of active physicians outside Federal Government today, private practitioners still account for 73 per cent of the total.

The Whole and Its Parts

● The following appeared in the July issue of Nation's Business: "Some citizens are asking Washington for federally collected funds to finance their urban renewal or development projects.

"The reason they give when asking for help is always the same: the city hasn't the money.

"This brings up a basic question. If our communities don't have the money to meet their needs individually, how can the total collected from them by Washington meet their collective needs?"

months, terminating in liver failure. We are not told anything of the patient's alcohol consumption, so we have to assume that he is innocent until proven otherwise and consider him a nonalcoholic though a few questionable spider angiomatas on shoulders and chest were recorded on November 6. Also he was described as obese which would be unusual in an excessive drinker. Late in the protocol we are told there was no known exposure to jaundice or other sickness, and no history of shots, drugs or transfusions. I assume the test for recognizing Thorazine was negative. This consists in presenting a burnt orange tablet of Thorazine to the patient and asking if he has taken this pill recently. If he answers "yes" the test is positive; a "no" is a negative test. So we have no data prior to 4 weeks before October when there was gastroenteritis with diarrhea; 2 weeks later dark urine and light stools and a change in the color of the eyes were noted. There is no story of crampy pain, chills, or fever. The examiner noted marked icterus and a large and slightly tender liver. The patient was in the hospital one week and it was felt he had improved some because the liver was "a little smaller" and the stool color had returned to normal. Unless the doctor actually saw the stool I doubt the accuracy of this statement. Usually we ask the patient the color and I suspect his answer is often not accurate. It has been my observation that an acholic stool actually varies from a grayish-white to a very light clay; it is practically never reddish-clay. During this time the bilirubin level increased so he was no better.

While he was out of the hospital, x-ray studies were done and were reported as normal. Apparently there was no displacement of stomach loop or bowel. I will now ask Dr. Halford to present any x-ray films he might have on this case.

DR. HALFORD: At the time this film was made (the 18th of the month) the liver shadow does not appear to be appreciably enlarged. You don't see the diaphragm or upper margin of the liver, but it does not appear to be significantly below the costal margin at this time. The spleen shadow is full. You might argue that it's a little large, but I believe that we have to hedge on this; it is at the upper limits of normal size that you see sometime. We don't know how far out it goes, but it is a full spleen shadow. The upper GI study only was done and it was read as negative by others than myself at the time, and as I look at it tonight for the first time, I would also call it negative. The shadow here is striking but I believe it is colon gas. My first impression when I looked at it was that well, we're going to have a case of gas in the gallbladder. It seems not quite clear on multiple films so I am going to call this gas in the colon.

DR. WITHERINGTON: The patient's condition deteriorated or at least failed to improve, so in early November he was readmitted and stayed until his death. Though there were some fluctuations in the level of the serum bilirubin, there was an overall inexorable increase in jaundice with final levels the highest I have ever seen recorded. The only recorded physical findings were the large liver, jaundice, palmar erythema, and questionable spider angiomas. Pruritis was an outstanding manifestation.

I think it was proper to operate on the patient. This was done one month after the second hospital admission. The flat bile duct and gallbladder ruled out obstruction due to stone or posthepatic tumor. The surgeon apparently palpated the large liver carefully and could feel no masses or nodules. The liver biopsy, as expected, showed biliary cirrhosis.

Now let us review the liver function studies and see if they are in keeping with biliary cirrhosis. There should be a high percentage of direct reacting bilirubin. Although over 50% in most of the tests, this is certainly not outstanding. The alkaline phosphatase reached astronomic figures so this is typical. The cephalin flocculation test is usually negative or slightly elevated; this was true in our case. In early tests the prothrombin time was normal or greater than normal; this is in keeping. Serum albumin was adequate when tested in the early part of the sickness. A most important point in keeping with biliary cirrhosis is the extremely high level of serum cholesterol, 842 mg.%.

As the disease progressed, other labora-

tory finding were in keeping with liver cell failure: (1) a leukemoid peripheral blood picture, (2) anemia, (3) azotemia, (4) increased levels of blood ammonia, (5) disturbance in blood coagulation with bleeding from needle punctures, and (6) elevated transaminase levels, both serum GOT and GPT.

The terminal event was a little sudden with abdominal pain, right shoulder pain aggravated by breathing, abdominal distention, and finally shock. I suspect the patient had spontaneous intra-abdominal hemorrhage and a massive intrahepatic hemorrhage is most likely.

So we feel certain the patient had biliary cirrhosis, and now we must decide what disease process produced it. Biliary cirrhosis may be classified into two large groups. (1) Extrahepatic due to the occlusion of major bile ducts, and (2) Intrahepatic. We believe extrahepatic obstruction was ruled out at operation, so we move on to intrahepatic considerations. Intrahepatic cirrhosis is subdivided into (A) primary, and (B) secondary. Primary intrahepatic biliary cirrhosis is described as occurring almost entirely in women who usually have an allergic bcakground. The number of these cases reported has increased greatly along with the common use of sulfonamides and other sensitizing drugs. Since the latter causes are important etiologic factors in secondary cases, it seems doubtful to me that any cases should be referred to as primary biliary cirrhosis, so we dismiss it from our diagnostic possibilities, and pass on to a consideration of the causes of secondary intrahepatic biliary cirrhosis.

This disease is the result of a progressive cholangiolitic hepatitis due in most instances to the hepatitis virus or to drug sensitivity. We have no history of ingestion of shots of alcohol, chlorpromazine, arsenicals, gout remedies, isocarboxazid (Marplan), methyltestosterone, moth balls, or rat poison. If he had a drug induced hepatitis, we have no way of knowing it. Granulomatous hepatitis as is seen in sarcoidosis or Brucellosis is unlikely. We have no information to suggest bacterial or leptospiral infection or infectious mononucleosis. Lupoid hepatitis is mentioned in passing but there was no other evidence of S.L.E. About 10 years ago at a C.P.C. here, a patient with polyarteritis nodosa was presented who developed jaundice as part of the picture and the terminal episode was a spontaneuos massive intrahepatic hemorrhage. This is not even likely here.

Remember this patient began with a gastroenteritis, followed in two weeks by painless jaundice, with some fluctuations in bilirubin level, and finally liver failure and death. This is certainly a good story for cholangiolitic hepatitis due to hepatitis virus progressing to biliary cirrhosis and liver failure. From the information recorded on the protocol it seems a little foolish to tread up another alley. However, this diagnosis seems a little too cut and dried. I am not inexperienced or naive enough to believe any pathologist is going to hand over a "tailor-made" diagnosis. He is much more inclined to dangle a tasty morsel such as an antemortem histologic description to ensnare the unwary clinician. My distrust leads me to consider the possibility of a tumor so situated in a large liver as to escape the palpating hand of the surgeon but still obstruct the hepatic ducts and produce eventually a biliary cirrhosis.

At the present time we are observing a lady progressing to cholemia with a solitary metastatic growth (leiomyosarcoma, primary site right colon, resected 2 years ago) situated at and between the two main hepatic ducts. This one was felt at operation and shown on an isotope scan. I would remind you, however, of Dr. McElroy's sage warning to "beware the man who has had a case."

If a tumor is present I would believe it most likely primary to the liver, guessing first a bile duct carcinoma and secondly a hepatoma. So my final diagnoses are: (1) Biliary cirrhosis produced by bile duct obstruction due to a primary tumor of the liver, but realizing that a cholangiolitis hepatitis due to hepatitis virus might be a better statistical choice. (2) Liver failure. (3) Probable intrahepatic hemorrhage.

DR. STEFFEE: Thank you, Dr. Witherington. I have asked two others to add some discussion in their particular specialties. Dr. Dorrity, may I start with you.

DR. DORRITY: I missed part of Barney's discussion, but following his is like the pro-

fessor in this ultraliberal progressive school who asked one of his freshmen a question similar to this, and the freshman said "we haven't studied it yet." He asked a sophomore in the joint conference, and the sophomore said "we've just started on that problem." He hit the junior, and the junior said "why I've forgotten that." Then to get an answer he asked a senior and the senior said "well I don't feel that I could add a thing to what's been said already." That goes for what I have to say so I'll be finished with that in a hurry.

In this first part I don't know if he mentioned anything about a diarrhea. In the tropics that would be in keeping with an amebic disentery with perhaps a small abscess coalescing into larger abscesses of the liver. Other space occupying lesions, I'll run down quickly: congenital cysts of the liver, with or without infection, with the gallbladder being the common seat of infection; metastatic carcinoma—from the GI tract which was mentioned, demonstrated by x-ray studies of large bowel or small bowel, from the pancreas, gallbladder, etc.; plus the inflammatory lesions of the pancreas; subacute or chronic perforation of an ulcer producing edema and obstruction of the common duct, but the pathologist in the protocol ruled those out, because the common duct and gallbladder were flaccid. We must then look for something producing these findings within the liver itself. The primary neoplasms for example are associated with cirrhosis in from 50 to 99%, depending on who is writing in the literature. I would still like to know whether or not a malignant melanoma had been removed, whether or not this man had had an enucleation of one of his eyes. Among primary tumors, one could have a hepatoma; a liver cell tumor which could be benign or malignant; a cholangioma in the bile ducts which could be benign or malignant; or a cholangiohepatoma, a combination of the two. Other primary tumors of the liver include those arising from vascular channels, the fibrous tumors, and those arising from cell rests. Dr. Steffee said a biopsy was taken but he didn't say whether or not it was a needle biopsy or a wedge biopsy.

DR. STEFFEE: It was a wedge biopsy.

DR. DORRITY: Well, at any rate, primary tumors in the liver frequently undergo hemorrhage and central necrosis. Most of those that are deep in the liver with severe hemorrhage will only occasionally blow through to the outside of the liver. To add up the series of events, it seems to me more logical that with diaphragmatic irritation, spilling into the peritoneal cavity with a hemoperitoneum with or without infection, but most probably with ascites also. My diagnosis: I would have to go for primary tumor of the liver, probably malignant, and if I had to get a little closer I would take the cholangiohepatoma (then I would be half right if he called it either one), with perforation, bleeding, etc. Still further, lots of these primary tumors will spread to the right heart, to the hilum of the liver, as well as the kidney. And the findings that I mentioned vary in direct proportion to the diligence of the prosector, and if Dr. Steffee didn't find it, I'm going to call for a recount.

DR. STEFFEE: Thank you. I asked Dr. William Morse if he would discuss the urinary findings.

DR. MORSE: I guess I am here to discuss the urinary findings. I think they are secondary findings really, associated with a gradually developing elevation of blood urea nitrogen from 18 up to 100 terminally. The first urinalysis had a 2+ albumin, 1 to 2 red cells, 0 to 1 white cell, and one finely granular cast per high power field. Later we find that the urinalysis was showing many granular and some hyalin casts. The specific gravity dropped on one occasion to 1.009, and we have the rare waxy cast also. I would consider the BUN. elevation to 25 mg.% on Dec. 18 to be due to early hepatic failure, since the serum ammonia was up to 240 micrograms %. These are the findings of the "bile nephrosis" one might expect. We see this in terminal cirrhosis, we see it in acute hepatitis and accept it though we wonder what it means sometimes. I know they didn't know what "bile nephrosis" was when I was in school. I looked it up in a rather recent publication and they still don't know. There have been numerous studies in Laennec's cirrhosis, in which glomerular filtration rates were

studied; half of them were up and half were down. The osmolality of the urine was studied; this was up and down in various cases. There was no relationship whatsoever of the urinary findings to the biliary findings. Also, there was very little relationship in the finding of bile nephrosis to the actual amount of disease present that is attributable to a so-called hepatorenal syndrome. That is, one may have leukemia without the swollen tubular cells and bile casts that one would expect in bile nephrosis, or it can occur with it. Extensive tubular necrosis may occur without azotemia whatsoever. Reports on hepatorenal syndrome were frequent about 15 to 20 years ago, and nobody knew exactly what it was. According to what I can find, it is still just as an ethereal a syndrome now as it was then. One author believes there must be a pre-existing ischemia in the kidney; whether this is due to lowered cardiac output is problematical; it may be due to a renal artery disease; it could even be due to metastatic lesions around the arteries due to one of the primary tumors just mentioned. Actually, the deposition of the bile casts has to occur before actual renal disease is present, but the presence of bile casts does not necessarily mean that a nephropathy is present. I cannot bring a primary renal tumor into this, metastatic to the liver, since there is simply not enough evidence. I thank you.

DR. STEFFEE: Now we will open the riscussion to questions from the floor.

DR. ROSSETT: First, I think you ought to be placated, Dr. Witherington, I think this man does have biliary cirrhosis. Secondly, statistically the hemorrhage is more often into the gut terminally, whether from biliary cirrhosis or neoplasm, rather than into the liver or into the peritoneal cavity. I would say the mode of exodus was by hemorrhage into the gastrointestinal tract from either varices, ulceration of the esophagus, stomach or duodenum, or possibly merely hemorrhagic gastritis.

The elevated alkaline phosphatase is always correlated with a ductal cell increase, metaplasia or neoplasia, whether this is intrahepatic or extrahepatic. Extrahepatic it would have to be where the hepatic ducts join. If one had a tumor there, this man's exodus should have occurred at about five months rather than two and a half months ago, so we'll have to move this into the liver and say this was primary carcinoma of the liver, death two and half months after the onset, with biliary cirrhosis secondary to ductal cell tumor or cholangioma. By the way, that 99 . . . where did you get that? If this is true, 99 mg.% bilirubin as was so accurately put by Dr. Witherington, this was three times death; 34.2 was the highest we had at Kennedy in the six years I was there, at St. Joe 42 was the highest, and I raised a question about that. But this 99—that's Cape Canaveral all right. It should be reported.

DR. STEFFEE: Well obviously that was one of the reasons for selecting this case to present. These finding were astronomic. They were repeated many times in assorted different dilutions and they all came out with the same answer, so I think they are reasonably reliable. I won't swear that the bilirubin was not 97 or maybe even 94, but it is phenomenal.

Dr. Witherington, would you comment on the apparent improvement in the laboratory values associated with initiation of prednisone. This is particularly noticeable in the earlier days of the disease. The reason I question this is that there were progress notes which I didn't include here, thinking they would be fairly obvious from this tabulation, that whenever they started prednisone the jaundice seemed to improve a bit.

DR. WITHERINGTON: The main thing I could say would be when in doubt use cortisone. It will reduce any inflammatory reaction whether it be primary or secondary to obstruction behind obstructing lesion. I think it probably accounts for the ups and downs of the bilirubin during the first ten times it was determined, then it went inexorably on uphill.

DR. STEFFEE: I would like to congratulate all of the discussants for an excellent job. Among them we have all of the diagnoses.

I think we may as well go on with the pictures. Figure 1 shows the crux of the problem. Note the small common duct, the tumor at the bifurcation, and the marked dilatation of right and left hepatic ducts



FIG. 1. Collapsed common duct; the tumor at junction of right and left hepatic ducts.

above the constricting mass. The tumor is also shown in "close-up" in figure 2.

The kidneys were extremely green, as one might anticipate from the bilirubin



FIG. 2. Close view of tumor.

level. The spleen was enlarged, weighing 450 grams, and the sectioned surfaces were homogeneous, rather pale. Malpighian follicles were not discernible.

The microscopic appearance of the tumor is shown in figure 3. In figure 4, we see nerve trunks, with tumor nests in perineural lymphatic spaces. Tumor cells are well differentiated, tall columnar cells, with

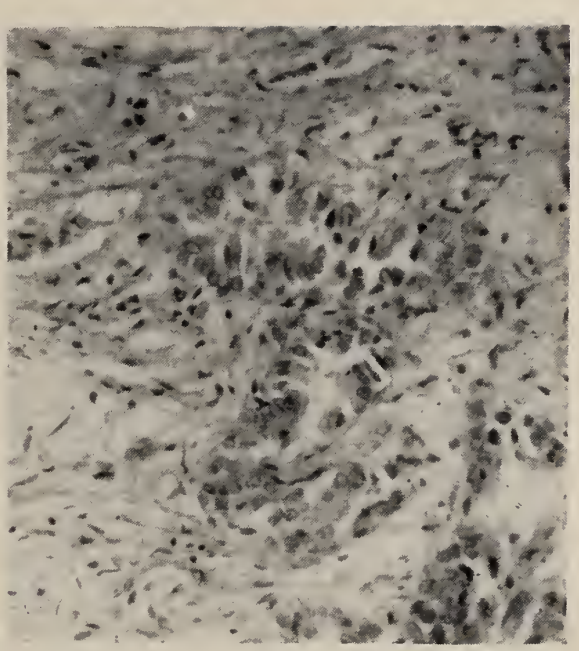


FIG. 3. Nests of tumor in collagenous stroma (X100).

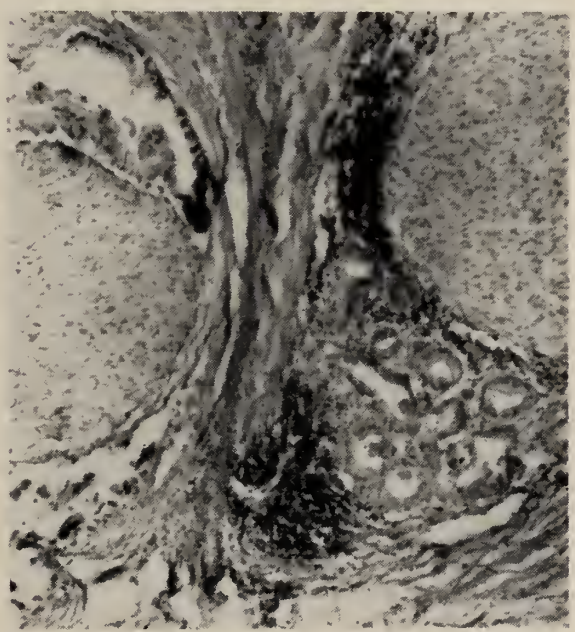


FIG. 4. Nerve trunks (porta hepatis) Tumor in perineural lymphatics (X42).

little pleomorphism, and almost no mitotic activity.

The liver showed many bile plugs in canaliculi, and there were large numbers of bile casts in renal tubules. The microcopic structure of the spleen was most unusual. There are columns of vacuolated cells, occasionally with extremely clear cytoplasm. Between these columns are masses of primitive hematopoietic elements. We can correlate the hematopoiesis—the leukemoid

picture, splenomegaly—this is known as agnogenic myeloid metaplasia. But what are the "foam cells"? They do not have the appearance of Gaucher cells, or Niemann-Pick's, or other lipodystrophies. The best postulate I can offer is that these cells are in response to the hypercholesterolemia, and that they have ingested large quantities of cholesterol. Unfortunately, we did not retain additional portions of spleen, so we cannot pursue this hypothesis biochemically.

The immediate cause of death in this patient was massive gastrointestinal hemorrhage. The entire tract was filled with blood. Despite careful search, no major bleeding sites were found; the hemorrhage apparently came from multiple small foci, primarily in the stomach.

VOICE: What tumor was it?

DR. STEFFEE: This is a bile duct carcinoma surrounding the junction of right and left hepatic ducts. May I again thank our discussants; they did beautifully.

THE ACUTE EFFECTS OF SMOKING ON MYOCARDIAL PERFORMANCE IN PATIENTS WITH CORONARY ARTERIAL DISEASE— Pentecost, Brian and Shillingford, John. Brit. Heart J. 26:422, 1964.

These authors utilized a quantitative method, previously described by Gabe et al in 1962, to assess cardiac performance in patients suffering from ischemic heart disease, with and without myocardial infarction, before, during, and after smoking. These results were compared with the response in normal subjects.

Studies were made on 33 subjects divided into three groups: (1) 14 volunteers with a normal cardiovascular system; (2) 5 patients with angina but no evidence of myocardial infarction; and (3) 14 patients with historical, clinical, and electrocardiographic evidence of myocardial infarction. One cigarette was smoked within a period of six to seven minutes.

The effects of nicotine on the cardiovascular system have been described by Comroe (1960), Watts (1960), and Burn and Rand (1958). The effects, in general, are simliar to those which occur with stimulation of the sympathetic nervous system. The effects are probably produced indirectly by way of chemoreceptors. There is an increased secretion of catecholamines by the adrenal medulla, an increase in urinary excretion of epinephrine, and a release of norepinephrine from local stores in the heart; the chromaffin tissue in the human heart is in the vicinity of the coronary arteries.

The effect of cigarette smoking on cardiac output and stroke volume, together with the blood pressure and heart rate, was measured in the subjects. Normal men, and those with angina in the absence of infarction, behaved similarly with an increase in purse rate, mean pressure, stroke volume, and cardiac output. After a myocardial infarction some of the patients showed a marked fall in stroke volume and cardiac output while smoking. The results of this study indicate that certain patients with ischemic heart disease respond to cigarette smoking in an abnormal manner. Therefore, it seems prudent to advise patients who have had a myocardial infarction not to smoke. (Abstracted for the Middle Tennessee Heart Association by Crawford W. Adams, M.D., Nashville.)

President's Page



Dr. Kampmeier

The American Medical Association has taken a significant step which will eventually touch large numbers of its members and influence medical care of the people of this country without end. It is designing the first course for a *Lifetime of Learning for Physicians*. The first step in continuing education of this form will consist of a consideration of myocardial infarction and, to quote the *AMA NEWS*, will offer a sequential presentation, "beginning with the attack and continuing with the topics of recognition, immediate management, hospitalization, hospital care, convalescence, rehabilitation, and management of the recovered patient." The Curriculum Committee on Cardiovascular Disease consists of well known educators and clinicians whose duty it is to design the course, select the faculty and to get the show on the road. It appears that the Curriculum Committee will need some nine to twelve months to complete the program of the course and the accompanying educational material. It is especially essential that ample time be taken to develop the design of the first course as a foundation upon which to build for the future.

To those of us who constituted the small Joint Study Committee in Continuing Education, the announcement of the first planned course is particularly satisfying. This Joint Study Committee received its major financial support from the American Medical Association and the Association of American Medical Colleges, with more than token contributions by six major specialty organizations—Colleges, Academies, or Associations of specialists. These too are happy to see this laying of the "cornerstone" of the *University Without Walls*, the brilliant concept of Dr. Bernard V. Dryer, Study Director of the Joint Committee, as described in 1962. (J. Med. Educ. supp., June, 1962)

If one accepts some of Dryer's statements that "continuing medical education of the physician is the most important single problem facing medical education today" since "the practicing physician is today the shortest and most efficient line between human biology and human beings," and that the "gap between scientific knowledge and its application grows wider each year," then one appreciates the importance of this move by the AMA. This gap which must be overcome exists because "(1) the rapid advances of research; (2) the maldistribution of opportunities for continuing medical education; (3) educational inadequacies even in those places where opportunities do exist; and (4) patterns of educational organization and dissemination of knowledge which are not efficient in terms of the physician-students' needs."

The print of the Report from The Joint Study Committee in Continuing Medical Education was hardly dry before a U. S. Senator had publicized it and urged the U. S. Public Health Service do something about implementing it. The Joint Study Committee urged the AMA Board of Trustees to move quickly, for it seemed imperative that this program be in the hands of the medical profession. Within a year, the AMA appointed the curriculum committee to "develop a national program of continuing education for the practicing physician . . . beginning on a small scale and gradually developing into a nationwide organization if considered advisable." (JAMA, June 22, 1964)

In its entry into the field of continuing education the AMA scores another "first" in the area of medical education consonant with its history as expressed in the reasons for its organization in 1847, "to elevate the standards of medical education in the United States." Promptly after that statement it established its *Committee on Medical Education* which, reorganized in 1904 as the *Council on Medical Education*, began a survey of medical schools. After several years the *Council*, recognizing the horrible deficiencies in many medical schools, asked aid of the Carnegie Foundation which resulted in the Flexner Report (1910). This was to revolutionize medical education in the United States and

Canada. Since then the *Council* has been the agency to approve medical schools by periodic inspection. In 1912, the *Council on Medical Education and Hospitals* began the first survey of hospitals, and since 1928 has maintained the registry of approved hospitals and given approval for interne and residency training in 1500 of these, through the Residency Review Committees in collaboration with specialty boards and organizations. More than three decades ago the fifteen AMA committees "to recommend what preparation was deemed essential to secure expertness in each of the specialties" laid the foundation for the Boards. With the quality of medical care at stake, the AMA *Council* has assumed in time responsibility for the approval of schools for certain paramedical persons.

Aware of the great diversity in quality and sponsorship of courses in the area of postgraduate and continuing education, the Advisory Committee on Continuing Education was formed several years ago as a standing committee of the *Council on Medical Education and Hospitals.* It is currently making a survey and evaluation of courses offered in this field and to advise where advice is sought. In laying the foundation of the *University Without Walls* for a *Lifetime of Learning for Physicians,* the American Medical Association is continuing its leadership in medical education as it has for more than a century.



President

THE JOURNAL

OF THE
TENNESSEE MEDICAL ASSOCIATION

Published Monthly
Devoted to the Interests of the Medical Profession of Tennessee
Office of Publication, 112 Louise Avenue, Nashville 5, Tenn.

Acceptance for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized July 15, 1932.

Copyright for protection against republication. Journals of the American Medical Association and of other state medical associations may feel free to quote from this Journal whenever they desire merely giving credit to this publication.

Address papers, discussions and scientific matter to R. H. Kampmeier, M.D., Editor, B-4211 Vanderbilt University Hospital, Nashville 12, Tennessee
Address organizational matters to Jack E. Ballentine, Executive Director, 112 Louise Avenue, Nashville 5, Tenn.

R. H. KAMPMEIER, M.D., Editor
Vanderbilt University, School of Medicine, Nashville, Tenn.

ADDISON B. SCOVILLE, JR., M.D., Assistant Editor
2104 West End Ave., Nashville, Tenn.

COMMITTEE ON SCIENTIFIC WORK AND POST GRADUATE EDUCATION
R. H. Kampmeier, M.D., Chairman
W. Powell Hutcherson, M.D., Chattanooga
Robert P. McBurney, M.D., Memphis
Eugene J. Spiotta, M.D., Memphis
(Specialty Society Representatives to be named)

AUGUST, 1964

EDITORIAL

TMA TALENT RECOGNIZED IN AMA

Elsewhere, in following pages, the members of TMA will be pleased to learn that responsible positions have been assumed in the American Medical Association by our representatives. Tennessee's senior delegate to the AMA House of Delegates, Dr. Charles C. Smeltzer, of Knoxville, was unanimously elected to a five-year term on the important five-man Judicial Council. Dr. Alvin J. Ingram of Memphis, also a delegate to the House of Delegates, was elected to a three-year term on the Board of Trustees of the AMA. Mr. Jack Ballentine, Executive Director of TMA, who has been a member of the National Advisory Committee to the division on Communications and Public Service of the AMA was elected chairman of this nine-man committee.

It is indeed gratifying to have TMA represented by men of their calibre and ability.

R.H.K.

MR. DAVID L. McQUIDDY, SR.

On Saturday, June 13, death took Mr. McQuiddy after a prolonged illness. With his passing, the *Journal of the Tennessee Medical Association* lost a long and helpful friend and advisor. Though the membership at large may never have thought of him as related in any way to the Association, he did, nevertheless, as publisher of our *Journal* for thirty-five years, have a sincere interest in TMA and its affairs. Certainly the Executive Director and the Editor, in the many hours spent with him, learned to appreciate his suggestions and fair dealing with the Association. These few lines stand as a tribute to a fine gentleman.

R.H.K.

MR. ALFRED J. JACKSON

To executive directors of state medical organizations and to editors of State Journals, this name was one of importance and of dedication. As of July 1, Mr. Jackson was retired as President and Treasurer of the Medical Journal Advertising Bureau, a position he has held since 1955, when this agency was separated from the American Medical Association. He had spent his lifetime of work with the AMA of which he became an employee in 1907. The success of cooperative buying of advertising for the State Journals reflects his energy and interest.

Readers of medical journals need only to be reminded that their publication rests upon the advertising revenue coming to the journals. Members of TMA may well understand the thanks of its officers and those of all state medical associations or societies as an appreciation of Mr. Jackson's contributions to organized medicine. The tribute prepared by Dr. Stanley B. Weld, former Chairman of the Advisory Committee, follows:

A TRIBUTE TO ALFRED J. JACKSON

To Alfred J. Jackson upon his approaching retirement we pay our tribute to a man of sterling character, an efficient business executive who has carried on his duties with competence and unfailing good judgement.

Coming to the Bureau on the recommendation of the Board of Trustees of the American Medical Association almost twenty years ago, he was unknown to the editors and business managers of the various State Medical Journals comprising the

(Continued on page 355)

THE SAN FRANCISCO ELECTION STORY



ALVIN J. INGRAM, M.D. CHARLES C. SMELTZER, M.D.

Two Tennessee Delegates Elected To High Offices In AMA

● Dr. Alvin J. Ingram of Memphis, was elected to the Board of Trustees of the AMA for a three year term. He has continually demonstrated leadership as a delegate to the AMA House of Delegates, and in his national, state, and local societies, as well as orthopedic associations, and currently serves on the Gundersen Committee of the House of Delegates reviewing the overall organizational structure of that body. He is a member of the active staff of the major hospitals of Memphis, has been chief of staff of the Crippled Children's Hospital, and is Associate Professor of Orthopedics at the University of Tennessee College of Medicine. He has served his community in many civic activities and has served the AMA as a member of its National Speakers Bureau since 1961.

Tennessee's senior AMA delegate, Dr. Chas. C. Smeltzer, was urged by the TMA Board of Trustees to nominate Dr. Ingram at the convention for the office of Trustee of the AMA. Though first little encouragement was found among AMA delegates, the Tennessee delegation's position prevailed. It offered the services of an extremely well qualified man who had demonstrated the traits of leadership as a physician and citizen, and the talents, dedication and character required by the finest traditions of the important position which was sought. With the many obstacles faced, a lesser man would have probably retreated, but Dr. Ingram accepted the challenge and the Tennessee delegation moved forward with him. In addition to Dr. Smeltzer, Dr. D. W. Smith, delegate, Dr. Julian K. Welch, alternate delegate, Dr. Bland Cannon and Dr. Wm. J. Sheridan, past presidents, and others were instrumental in the campaigning to put Dr. Ingram in office.

A letter setting forth Dr. Ingram's qualifications was sent to every member of the House of Delegates of the AMA. Upon arriving in San Francisco, though the situation still did not look encouraging, Dr. Ingram and the TMA delegation and the Executive Director, launched a vigorous campaign with the aid of allies. Dr. Ingram appeared before various state delegations, prior to their final caucas, to make known his views on current AMA issues. Members of some delegations had stated they were committed, but reversed their position after a "session with Al."

Dr. Ingram was nominated from the floor by Dr. Smeltzer. In the final tabulation on election day, it was found that Dr. Ingram and the incumbent were deadlocked for the office of Trustee, necessitating a run-off. For the first time in history there was a tie for the trustee position. Dr.

Ingram had a substantial majority in the run-off and Tennessee had representation on the Board of Trustees.

With the assets Dr. Ingrahm possesses, he is without question the man for the job to which he was elected.

● Tennessee's senior delegate, Dr. Chas. C. Smeltzer of Knoxville, was presented to the House of Delegates by Dr. Norman Welch, AMA President, for the important position of membership on the AMA Judicial Council. Dr. Smeltzer has long been one of the most highly regarded members of the House of Delegates. His accomplishments are many since he has been a leader in the medical and civic affairs of his community and state for many years. He is on the staff of the leading hospitals in Knoxville and has actively served in many capacities in his local medical society, including serving as President. He is a member of the American College of Surgeons. He holds important memberships in his state medical association, including committee assignments on the Legislative and Public Policy Committee. On the national level, Dr. Smeltzer was appointed by the Speaker of the House to the important Advisory Committee to the House on the AMA Communications and Public Relations Program. He presently serves on the Committee on Blood. He has often served as chairman of many important Reference Committees in the House of Delegates.

Dr. Smeltzer represents the finest traditions of medicine and the office to which he was elected was one which sought him. He was the only one considered for the vacancy on the Judicial Council and his election was unanimous for a five-year term.

1964 will be long-remembered as a year when two of Tennessee's leading and most able physicians were recognized for their abilities and statesmanship, resulting in the recognition bestowed upon them by their colleagues in the House of Delegates of the American Medical Association.

PROGRAMS AND NEWS OF MEDICAL SOCIETIES

Ballentine Wins AMA Unit Post



Jack E. Ballentine

Mr. Jack E. Ballentine, executive director of the TMA was elected chairman of the National Advisory Committee to the division on Communications and Public Relation of the American Medical Association.

The nine members of the committee are executives of Medical Associations from the states of New York, Massachusetts, North Carolina, Iowa, Illinois, Oklahoma, Nevada, California and Tennessee.

Mr. Ballentine is serving his third year as a member of the National Advisory Committee and his selection as Chairman is a well deserved honor.

Knoxville Academy of Medicine

The July 14th meeting of the Society was held in the Academy of Medicine Building. Guest speaker was Dr. O. M. Derryberry, Chattanooga, Director of Health for the Tennessee Valley Authority. His subject was "Pollution in Fort Loudon River—Whose Problem?"

An AMPAC film entitled, "Opinion Maker" was shown at the conclusion of the Academy program.

Benton-Humphreys County Medical Society

Members of the Benton-Humphreys County Medical Scoiety heard Dr. David

R. Pickens, Jr. of Nashville speak on "Cancer" at its regular meeting held on July 3rd at Wallace's Restaurant in Waverly.

Roane-Anderson County Medical Society

Dr. Wm. T. Satterfield, Chairman of the Trust Committee, Memphis and Shelby County Medical Society, and Mr. Denby Brandon, Jr., Plan Coordinator of the Memphis Investment Retirement Trust, were guest speakers at the monthly meeting of the Roane Anderson County Medical Society on June 30th. A dinner preceded the program in the cafeteria of the Oak Ridge Hospital.

The Society's annual picnic was held July 8th at the home of Dr. and Mrs. Henry B. Ruley, Oak Ridge.

Chattanooga-Hamilton County Medical Society

The Society met on August 4th in the Interstate Auditorium. Speakers and their subjects were: Dr. Charles W. Hawkins—"Horseshoe Kidney"; Mr. George Rice, Executive Director, Metropolitan Council of Community Forces, and Dr. Augustus McCravey—"The Community Looks at its Health Problems."

New TMA Staff Member



Bob Berry

On May 15, 1964, Mr. B. D. (Bob) Berry, 27, joined the staff of the Tennessee Medical Association as administrative assistant. He came to the Association from Duncan, Oklahoma, where he served as assistant manager of the Chamber of Commerce.

Mr. Berry is a native Oklahoman, born near Duncan where he lived and received his early education. He entered Southeastern Oklahoma State College in 1955 on an athletic scholarship and graduated with a B.S. degree in 1959. In college he was Vice-President of the Student Senate, Secretary-Treasurer of the Blue Key National Honorary Fraternity, and Treasurer of Tau Kappa Epsilon, in addition to receiving the award as "The Most Friendly Man on Campus."

Mr. Berry is experienced in organizational and association work, having been connected in this type of work since leaving college. He has served as manager of several industrial associations and smaller Chambers of Commerce in Oklahoma prior to his previous managerial position with the Duncan Oklahoma Chamber of Commerce.

He has been active in the work of the Jaycees, receiving the "Spoke" award and serving as Vice-President. He was active in Toastmasters International and Lions International, Professionally he has been active in the Oklahoma State Chamber of Commerce, the State Chamber of Commerce Executives Association, serving on the Board of Directors and as Secretary-Treasurer, and has also held positions in the Executives Organization of the U. S. Chamber of Commerce.

Mr. Berry is a graduate of the Institute for Organizational Management at the University of Houston, Texas. His experience and background fit him ideally for organizational work with the Tennessee Medical Association, and his activities and responsibilities will greatly aid the program and work of the Association.

He is a member of the Methodist Church and is married and the father of three children. He resides with his family on Soper Avenue in Nashville.

DEATHS

Dr. John S. Freeman, 83, Springfield, died July 14th at Jesse Holman Jones Hospital.

Dr. Robert F. Patterson, Sr., 83, Knoxville, died June 20th at Baptist Hospital.

Dr. E. Lynne Anderson, 72, died July 8th at Rosewood Convalescent Home in Memphis.

Dr. Joseph A. Gardner, Jr., 51, Memphis, died at his home on July 3rd.

Dr. William J. Abel, 87, Decatur died June 14th at his home.

Dr. James G. Anderson, Jackson, 73, died June 26th at Jackson-Madison County General Hospital.

Dr. George Franklin Aycock, 76, Nashville, died July 8th.

Dr. Mary F. Poe, Memphis, 50, died May 29th.

NATIONAL NEWS

The Month in Washington
(From the Washington Office, AMA)

The House Ways and Means Committee handed the Administration a defeat by refusing to act this year on the controversial King-Anderson plan for a compulsory social security hospital-medical program for the aged. However, King-Anderson supporters expressed the hope the Senate would add the proposal to a flat social security cash benefit and tax increase bill adopted by the Ways and Means panel.

In addition to blocking King-Anderson, the Ways and Means Committee decided to take no action on proposed changes in the Kerr-Mills program of federal aid to states for health care benefits for the elderly who need financial assistance to pay hospital and medical bills.

The 5% boost in the current maximum $127 monthly payment for retired social security beneficiaries would be the first social security cash increase in six years. It is designed to keep the pension payments abreast of the cost of living. The increased benefit would be financed by a tax rise that, in addition to already slated tax boosts, would bring the social security levy by 1971 to 4.8% paid by both worker and employer on the first 5,400 of salary. Present tax is 3.625% of $4,800. The benefits would add up to an extra $1 billion a year.

The first motion before the committee was to increase benefits by 6% but Rep. King urged the King-Anderson supporters on the Democratic side of the panel to oppose this on grounds it would bring the social security tax so high it would be difficult to attach King-Anderson and even higher taxes to social security.

Other social security changes in the legislation would: Extend social security to an estimated 150,000 self-employed physicians. Allow widows to receive benefits at age 60 instead of 62 with a slight cut in payments. Continue payments to widows with dependent children in school until the children reach age 22 instead of 18.

Commenting on the Ways and Means action, Dr. Norman A. Welch, president of the AMA, declared the committee "acted wisely and responsibly" in refusing to approve the King-Anderson bill. In a statement, he declared, "We are confident that this decision is in keeping with the attitude of the majority of the American people toward this legislation, as reflected in numerous surveys by members of Congress and by private opinion sampling organizations. We have opposed King-Anderson legislation because it would force heavy payroll tax increases on the nation's workers and their employers to provide hospitalization benefits indiscriminately to all the elderly, the wealthy and the well-to-do included."

★

The drug industry decided to challenge in court the controversial Food and Drug Administration regulation requiring drug makers to produce proof of efficacy for virtually all new drugs approved since 1938, in addition to other provisions. The industry has argued that Congress intended for the law to apply only to new drugs since enactment of the legislation. The FDA asserted that "what Congress intended was a comprehensive review of all drugs now on the market as a result of new drug clearance."

★

The American Medical Association recommended that retired military personnel receive health care benefits under a contributory private health insurance plan similar to that now in operation for civilian Federal workers.

Dr. Reuben A. Benson, chairman of the AMA Council on National Security, told a House Armed Services Subcommittee that by 1980 it is estimated that the number of retired military will reach 4,397,000.

"Any health care program devised or conceived must be sufficiently elastic and effective to adjust to these demands," he noted. He said the AMA recommends the adoption of a plan patterned after the Federal Employes Health Benefits Program. "It is the AMA's opinion that to the maximum extent possible, this care should be provided by civilian physicians in civilian facilities. The Association, however, recognizes that the retiree and his dependents may be authorized the use of military facilities but recommends that such use be limited to present military facilities on a space-available basis."

★

The American Medical Association asked Congress to reject proposals that would reimburse qualified Federal workers for chiropractic treatment under the Federal Employes Compensation Act. In a letter to a Senate Labor Subcommittee, Dr. F. J. L. Blasingame, AMA executive vice president, declared that chiropractic is not based on sound scientific principles.

MEDICAL NEWS IN TENNESSEE

Woman's Auxiliary to TMA Receives Award

The Woman's Auxiliary to the Tennessee Association received an award of merit for its outstanding efforts in the American Medical Association's Education and Research Foundation program during 1963-64. The Tennessee Auxiliary, whose total contribution was $17,756.29 made the greatest per capita contribution by any state auxiliary. A total of $306,318.14 was given by all national auxiliaries. The award was made to the TMA Auxiliary on June 23rd during the annual meeting of the American Medical Association in San Francisco. Tennessee AMA-ERF chairman was Mrs. W. A. Hensley of Cookeville, and national AMA-ERF chairman was Mrs. E. E. Wilkinson of Nashville.

Major Disaster Plan in Operation in Knox County

Knoxville and Knox County now have put into full operation a major disaster plan which includes the installation of radio communications among the four major hospitals, police, blood bank and ambulance service. Although it is based on a Civil Defense model, the program was started over two years ago by a volunteer group composed of physicians, Red Cross officials, rescue squads, law enforcement officials and hospital administrators. It has since taken the name "Medical Health Service Committee on Major Disasters." Dr. James Prose, surgery specialist, is chairman of the committee. Other members of the committee, representing the Knoxville Academy of Medicine, are: Drs. Carl Nelson, Robert Lash and Reece Patterson. The Civil Defense Office of Nashville has notified the Committee that Knoxville will receive equipment for a 200-bed Civil Defense Hospital. Although the committee is voluntary, the city of Knoxville gave $4500 for the purchase of the radio system.

Middle Tennessee Heart Association

The Middle Tennessee Heart Association will spend $44,806 this year for heart research and the support of medical service projects relating to diseases of the heart and circulation. Allocations for research include $6,000 for the establishment of an MTHA research fellowship, the appointment to be made this fall; $14,229 for support of research projects as yet undetermined, to be financed jointly with other Heart Association Chapters in the State, and $1,275 for MTHA student fellowships. A total of $11,250 was designated for Vanderbilt University investigators: $3,000 to Dr. Allan Bass, professor of pharmacology; $6,800 to Dr. Elliot Newman, professor of experimental medicine; and $1,450 to Dr. Andrew Dale, associate professor of clinical surgery. The budget also provided $11,900 for the support of medical service projects.

Eye Bank to be Established In Knoxville

An eye bank will be established in Knoxville under the sponsorship of 48 East Tennessee Lions Clubs. The bank will be a clearing house for keeping records about persons needing transplants and names of donors who have consented to the removal of their eyes after death. The only other such facility in Tennessee is at Vanderbilt

University Hospital. Another major eye bank is at Winston-Salem, North Carolina.

University of Tennessee College of Medicine

The College has 19 full-time teachers per 100 students, slightly less than the national average of 20 instructors for 100 students. It has 204 full-time teachers and 1,090 medical students and medical student equivalents, such as interns and residents.

★

The July number of *Medical World News* featured the College under the title of *Medical School Success Story* with a graphic description of its founding and growth over the years, with a tribute to those who have had the vision to promote it to its present state of excellence in medical education and research, and the fulfillment of its objective to provide physicians and surgeons to care for the medical needs of the people of Tennessee.

★

Dr. G. D. Conger of Conger Life Insurance Company has given the University of Tennessee 200 shares of stock in the company in support of the College of Medicine. Income from the stock will be used to support student scholarships at the Medical Units.

St. Jude Hospital

Dr. Robert W. Darlington, research scientist at St. Jude Research Hospital, has been awarded a $42,799 research grant by the National Institute of Allergy and Infectious Diseases, The grant, to be extended over a three-year period is designed to provide new information concerning the development of virus particles and cellular changes during the course of infection.

★

The National Institute of Child Health and Human Development has granted a research career development award to Dr. David W. Kingsbury, a member of the Hospital's laboratory of virology and an instructor in microbiology at the University of Tennessee Medical Units.

Vanderbilt University School of Medicine

The National Foundation granted $68,964 for the continued support of the birth defects clinical study center. The grant brings the total of March of Dimes funds given to the center to $342,526. The National Foundation opened the center in 1960. At that time, there was only one other birth defects center in the nation; today there are 48 centers across the nation. The Vanderbilt Center provides treatment for children with birth defects, holds a weekly free clinic, conducts a many-sided program of Research, and is a part of the teaching program of the medical school. In addition to the research done in the center, the National Foundation has given $100,063 to a special research project on the causes of birth defects, directed by Dr. Robert W. Noyes, head of the department of obstetrics and gynecology.

Meharry Medical College

The new hospital and research wings were dedicated on June 14th. The new West Wing of the George W. Hubbard Hospital was built at a cost of $1.5 million and was designed to meet the demand for more private and semiprivate beds, adding a net total of 75 beds and increasing the total hospital capacity to 260 beds.

The new research wing, consisting of over 6,500 square feet was built at a cost of $401,792. It was the College's second major expansion, providing six suites for pure research in the six basic sciences of anatomy, biochemistry, microbiology, pathology, physiology and pharmacology.

Tennessee Pediatric Society

The Fall Meeting of the Society will be held Sept. 13, 14, 15, at Lake Shore Lodge, Chattanooga. Guest Speakers will be: J. M. Gerrard, D.M., Professor of Pediatrics, University of Saskatchewan, Saskatoon, Canada; Robert S. Stempfel, Jr., M.D., Associate Professor of Pediatrics, Duke University, Medical Center, Durham, N. C.; Joseph Stokes, Jr., M.D., Professor of Pediatrics, University of Pennsylvania and the Children's Hospital, Philadelphia.

PERSONAL NEWS

Dr. Roy W. Epperson, Athens, has been reappointed to a four-year term on the Board of

Trustees of Tennessee's tuberculosis hospitals.

Dr. Francis M. Fesmire has assumed the position of pathologist and director of clinical laboratory services at Rutherford Hospital, Murfreesboro.

Dr. M. M. Young, director of the Chattanooga-Hamilton County Health Department, was a recent speaker before the Kiwanis Club of Chattanooga.

Dr. Nat T. Winston, superintendent of the Moccasin Bend Psychiatric Hospital, Chattanooga, has been named to head the State Mental Health Department's Division of Services to the mentally ill.

Dr. James S. Cheatham, currently director of research and training at the Mental Health Institute at Cherokee, Iowa, has been appointed superintendent of the Chattanooga facility.

Dr. Joseph C. Knight has opened his office for the practice of internal medicine and cardiology in Murfreesboro.

Dr. E. Park Niceley, Knoxville, attended a recent meeting of the British Section of the International College of Surgeons.

Dr. J. Eugene Howard has completed residency in obstetrics and gynecology at Nashville General Hospital and has returned to private practice in Jefferson City.

Dr. Laurence W. Jones, Union City, has been elected president-elect of the Tennessee Heart Association.

Dr. Charles V. Dowling, Memphis, spoke on "Recent Advances in Treatment of Heart Disease" at a meeting of the Public Affairs Council of Memphis.

Dr. Julian K. Welch, Jr. has been elected Mayor of Brownsville.

Dr. Andrew Cserny, formerly of Huntington, Virginia, has moved to Jellico to become associated with Bethany Hospital.

Dr. James E. Goldsberry, civil service medical examiner with the Metropolitan Public Health Department of Nashville and Davidson County, has been named acting director of health effective July 1.

Dr. J. R. VanArsdall has announced the opening of his office for the practice of medicine at Bradley Medical Center in Cleveland. He will specialize in diseases and surgery of the eye.

Dr. Hoyle E. Bowman, Elizabethton, has been elected chief of staff at Carter County Memorial Hospital.

Dr. Thomas C. Monroe, Chattanooga, has announced that **Dr. Harry V. Bork** will join him in the practice of obstetrics and gynecology.

Dr. J. M. Sams, otolaryngologist of Johnson City, has been appointed Tennessee State Chairman of the Deafness Research Foundation.

Dr. Clarence L. Jones, Jr. is now associated as a general practitioner with the Wallace and Stephenson Clinic in Gallatin.

Dr. John H. Burkhart, Knoxville, was a guest speaker at the 77th annual convention of the Tennessee Pharmaceutical Association.

Dr. Donald R. Dees has completed a three-year residency in radiology at John Gaston Hospital in Memphis and is now in private practice in Morristown. He is associated with Morristown Hamblen Memorial Hospital.

Dr. Henry A. Callaway, Jr., Maryville, has been named president of the Blount County Chapter of the American Cancer Society.

Dr. F. Jones Smiley, Chattanooga, has been accepted as a diplomat on the American Board of Obstetrics and Gynecology.

Dr. Frank G. McCampbell, Jr. has announced the opening of his office in Clarksville for the practice of obstetrics and gynecology.

Dr. Henry A. Cohen announces the opening of his office at 1700 Hayes Street, Nashville, for the practice of psychiatry.

Dr. Jim Carroll, Savannah, has been named chairman of the Red Cross Chapter for Hardin County.

Dr. Seaton Garrett, Jr., formerly of Knoxville, has joined the staff of the health division of the Oak Ridge National Laboratory. He is a specialist in internal medicine.

Four physicians have been added to the staff of Henry County General Hospital: **Dr. Walter P. Griffey, Jr.**, internal medicine, formerly with U.S. Public Health Service; **Dr. G. L. Hollister**, general practice; **Dr. Augustus L. Middleton, Jr.**, pathology, formerly of Jackson; and **Dr. Wm. Gardner Rhea, Jr.**, surgery.

Dr. Hyman Rossman has returned to Oak Ridge and opened his office for the practice of psychiatry.

Dr. Wm. A. Hensley, Cookeville, is president-elect of the Middle Tennessee Medical Association, elected at its recent annual meeting in Sewanee. Dr. Hensley is also president of the Upper Cumberland Medical Society, elected to this office at the meeting in Red Boiling Springs.

The American Board of Pathology announces as Diplomates, **Dr. Michael M. Stump**, Chattanooga, and **Drs. Carolyn F. Blackwell** and **Warren W. Johnson**, Memphis.

Dr. E. S. Kaplan, having completed his training in Neurologic Surgery at the Mayo Clinic, has opened his office in Memphis.

Dr. Jack M. Miller, orthopedic surgery; **Dr. Robert A. Hardin**, General and thoracic surgery, and **Dr. Fred C. Robinson**, pediatrics, announce their association with the Miller Clinic-Hospital of Nashville.

Dr. J. Kenneth Jacobs, Nashville, announces the removal of his office to the 21st and Hayes Medical Building.

Dr. Arthur Gernt Bond has opened his office for the practice of neurological surgery in Nashville.

Dr. Crawford W. Adams, Nashville, announces the removal of his office to the 21st and Hayes Medical Building.

Dr. Cullen R. Merritt, II, has joined Doctors Frist, Scoville, Kochtitzky and Kinnard, for the practice of internal medicine and pulmonary disease, Nashville.

Dr. Walter L. Diveley, Nashville, announces the

removal of his office to the 21st and Hayes Medical Building.

Dr. Frank W. Stevens and **Dr. Charles Corbin, Jr.**, Nashville, have joined Doctors Charles B. Smith and H. James Crecraft in the practice of psychiatry.

ANNOUNCEMENTS

Calendar of Meetings, 1964

State

Sept. 13-15—Tennessee Pediatric Society, Lake Shore Lodge, Chattanooga.

Sept. 28-29—Tennessee Valley Medical Assembly, Tivoli Theatre, Chattanooga

Nov. 4-6 —Annual Assembly of Tennessee Academy of General Practice, Gatlinburg Auditorium

Nov. 6 —East Tennessee Heart Association in conjunction with TAAGP, Gatlinburg

Nov. 11-13 —Family Infections—Vanderbilt University School of Medicine

Regional

Sept. 13-15—Seventh Medical Progress Assembly, Birmingham, Ala.

Sept. 16-19—Colorado Medical Society, Broadmoor Hotel, Colorado Springs

Sept. 29-
Oct. 1 —Kentucky State Medical Association, Kentucky Hotel, Louisville

Oct. 11-14 —Medical Society of Virginia, Golden Triangle Hotel, Norfolk

Oct. 13-15 —Indiana State Medical Association, Murst Temple, Indianapolis

Nov. 16-18 —Medical Society of District of Columbia, Statler-Hilton Hotel, Washington, D. C.

Nov. 16-19 —Southern Medical Association 58th Annual Meeting, Memphis

National

Sept. 9-12—International College of Surgeons (North American Federation), Chicago

Sept. 20-23—American Urological Association (Northeastern Section), Pocono Manor Inn, Pocono Manor, Pa.

Sept. 28 —AMA Council on Occupational Health, Rice Hotel, Houston

Oct. 5-9 —American College of Surgeons, Conrad Hilton Hotel, Chicago

Oct. 8-10 —Association of American Physicians and Surgeons, 21st Annual Meeting, The Roosevelt Hotel, New Orleans, Louisiana

Oct. 10-14 —American Society of Anesthesiologists, Americana Hotel, Bal Harbour, Florida

Oct. 11-16 —American Society of Plastic and Reconstructive Surgeons, Fairmont Hotel, San Francisco

Oct. 15-21 —Association of American Medical Colleges, Denver Hilton Hotel, Denver

Oct. 16-24 —American Society of Clinical Pathologists, Americana Hotel, Bal Harbour, Florida

Oct. 18-23 American Academy of Ophthalmology and Otolaryngology, Palmer House, Chicago

Oct. 28-30 —American Cancer Society, Biltmore Hotel, New York

Nov. 28-29 —American College of Chest Physicians (Interim Meeting), Fontainebleau Hotel, Miami Beach, Fla.

Nov. 29-
Dec. 2 —American Medical Association (Clinical Meeting), Auditorium Exposition Hall, Miami Beach, Fla. and Americana Hotel, Bal Harbour, Fla.

Dec. 4-5 —Southern Society for Pediatric Research, Sahmrock-Hilton Hotel, Houston

Dec. 8-10 —Southern Surgical Association, Boca Raton Hotel, Boca Raton, Fla.

Postgraduate Course in Gastroenterology

This course will include: diseases of the Esophagus, Stomach, and Duodenum and is offered by the Cleveland Clinic Educational Foundation, Sept. 30 through Oct. 1. It is approved for 12 credit hours Category I by the American Academy of General Practice. Write to: Education Secretary, The Cleveland Clinic Educational Foundation, 2020 East 93rd Street, Cleveland, Ohio, 44106.

National Voluntary Health Conference

A national leadership conference directed at the better understanding of mutual problems which affect both lay and professional people in dealing with voluntarism and health will be held Sept. 17-18, at the Drake Hotel in Chicago. The conference, sponsored by the Council on Voluntary Health Agencies of the American Medical Association, will have as its theme: "The Voluntary Health Movement Today and Tomorrow."

MR. ALFRED J. JACKSON

(Continued from page 347)

Bureau. In a short period of time Mr. Jackson won the confidence and respect of those whom he came in contact and the Bureau flourished under his guiding hand.

It is with deep regret that the Board of Directors of the Bureau loses Mr. Jackson as its President and herewith records its unanimous appreciation of his devotion to it.

May the coming years of retirement bring to him the rewards of friendships cultivated far and wide and may he long continue to enjoy good health and a happiness so well deserved.

PLACEMENT SERVICE

The Placement Service of the Tennessee Medical Association is designed to assist doctors and communities. Further information and contacts, to both physicians and communities, is available from the Public Service Office, 112 Louise Avenue, Nashville, Tennessee—telephone 291-4584.

Locations Wanted

SURGEON, 31 years of age, graduate of the University of Rochester, member American Board of Surgeons, Candidate American College of Surgeons, would like associate or clinical practice anywhere in Tennessee with population 10,000 plus. Married. Protestant. Available now. LW-505

◆

INTERNIST, with sub-specialty in endocrinology, age 29 years, now in residency, would like any type practice in Middle or West Tennessee area, 25,000 plus population. Graduate University of Tennessee College of Medicine. Single. Methodist. Available November 1, 1964. LW-511

◆

GENERAL PRACTITIONER, 27 years of age, graduate of the Medical College of Alabama, wants associate, assistant, or clinical practice, any size city in Tennessee. Now in military service; married; Baptist. Available early fall. LW-515

◆

INTERNIST, with practice in hemotology-cardiology, graduate of New York University School of Medicine, 38 years of age, would like associate, clinical or institutional practice in Middle or West Tennessee, 25,000 plus. Board eligible. Married. Lutheran. Available within 3 months of acceptance. LW-520

◆

OBSTETRICIAN-GYNECOLOGIST, age 34, married, graduate of the University of Arkansas, would like partnership practice in Middle or West Tennessee city of 40,000 plus. Board certified. Jr. Fellow American College of Surgeons. Fellow American College Ob-Gyn. Available within 30 days. LW-528

◆

GENERAL SURGEON, age 30, graduate University of Chicago School of Medicine, presently in military service, would like assistant or associate practice in Middle or West Tennessee city, 50,000 plus. Tennessee license. American College of Surgeons. Jewish. Married. Available August 1, 1965. LW-529

◆

ORTHOPEDIC SURGEON, age 30, graduate of the University of Tennessee College of Medicine, wants associate practice in large city in East or Middle Tennessee. Now in residency; single. Protestant. Tennessee license. Available August 1964. LW-530

◆

INTERNIST, age 34, graduate of the Harvard Medical School, would like assistant, associate or clinical practice in any location in Tennessee, 25,000 plus population. Now in private practice. Married; Methodist. Available upon notice. LW-531

◆

PEDIATRICIAN, age 31, graduate of the University of Arkansas, Board eligible, would like associate or clinical practice in any location of Tennessee. Now on active duty with U. S. Navy. Married. Jewish. Available July 1965. LW-532

◆

GENERAL SURGEON-PROCTOLOGY, age 32, graduate of Tulane School of Medicine, now on active duty with Air Force, would like associate or clinical practice in Middle or West Tennessee city, 10,000 plus. Married. Methodist. Available September 1964. LW-533

◆

Physicians Wanted

ASSOCIATE needed in East Tennessee, 6,000 population, for general practice. Age 25-35, with one year internship. New, Private office; examining rooms and equipment available. Hospital in community. PW-134

◆

PEDIATRICIAN, with two years internship and one year residency training, needed in Middle Tennessee city of 8,000, near large metropolitan area. Office space near hospital. PW-137

◆

OFFICE ready for immediate occupancy by general practitioner in suburb of large East Tennessee city. Or, will build to suit physician on another location nearby. PW-201

◆

INTERNIST is needed as assistant in West Tennessee city of 15,000. Well established and equipped office. Age 25-35. Hospital practice required. Area an agricultural and industrial one. Excellent opportunity. PW-203

◆

PRACTICE and office equipment of recently deceased physician in West Tennessee city of 5,000 for lease or sale. Office space consists of two examining rooms, two treatment rooms, laboratory, plus other essential facilities. General practice with general surgery. PW-204

◆

WILL BUILD office or clinic in Middle Tennessee town of over 12,000, near government installation. Location of building will be adjacent to shopping area located near many residencies in upper income bracket. New city hospital planned. At present have 35 bed privately owned hospital. PW-208

◆

INTERNIST or GENERAL PRACTITIONER to be associated with clinic group; adjoining general hospital. Two 12,000 population, trade area an additional 3,000. Located near major metropolitan area. PW-211

◆

INTERNIST (Christian) wanted. Will furnish, in West Tennessee metropolis, a modern, air-conditioned office at no charge, requiring only that substitution be made on days off and on vacations. After one year, reasonable arrangements will be made. PW-212

◆

GENERAL PRACTITIONER wanted as replacement in West Tennessee town of over 4,500. Agricultural and industrial area. Housing, office space, office equipment available. 40 bed hospital in town. PW-213

◆

INTERNIST, associate, needed in Middle Tennessee town of 34,000+. Office space available. 175 bed hospital, well equipped. Near large air base. Current physicians enjoy congenial association. PW-214

PEPTIC ULCER • FUNCTIONAL HYPERMOTILITY • IRRITABLE COLON

PYLOROSPASM • BILIARY DYSKINESIA • PANCREATITIS • URETERAL AND URINARY BLADDER SPASM • GASTRITIS



PRO-BANTHINE (propantheline bromide) Assures Authoritative Anticholinergic Control in Gastrointestinal Dysfunctions

The clear and consistent therapeutic benefits of Pro-Banthine (propantheline bromide) have made it the preferred anticholinergic for the past decade.

During that time, many compounds have been developed and proposed as alternatives. In the appraisal of Roach[1] ". . . few, if any, have seemed to offer a distinct improvement, . . ."

Early investigations showed that Pro-Banthine (propantheline bromide) reduces motility and acid secretion and may be used in a wide range of dosage, to bring prompt, positive anticholinergic benefits to patients with peptic ulcer, spastic colon, pylorospasm and related gastrointestinal dysfunctions.

Recent evaluations sustain these earlier judgments. In a current authoritative assessment based mainly on the factors of potency, superiority to atropine, clinical experience and physiologic study, Steinberg and Almy[2] select as the first two preferred anticholinergic drugs, methantheline [Banthine] and propantheline [Pro-Banthine].

The name Pro-Banthine (propantheline bromide) sets a stamp of therapeutic authority on any anticholinergic prescription.

Side Effects and Precautions—Urinary hesitancy, xerostomia, mydriasis and, theoretically, a curare-like action may occur. The drug is contraindicated in patients with glaucoma or severe cardiac disease.

Dosage—The usual adult dosage is one tablet of 15 mg. with meals and two at bedtime; this amount may be doubled or tripled for patients with severe conditions. Pro-Banthine (brand of propantheline bromide) is supplied as tablets of 15 mg. and, for parenteral use, as serum-type ampuls of 30 mg.

SEARLE

Chicago, Illinois 60680

Research in the Service of Medicine

1. Roach, T. C.: Therapy of Peptic Ulcer, J. Louisiana Med. Soc. *115*:136-139 (April) 1963.
2. Steinberg, H., and Almy, T. P., Drugs for Gastrointestinal Disturbances, Chapter 21, in Modell, W. (editor): Drugs of Choice —1964-1965, St. Louis, The C. V. Mosby Company, 1964, p. 343.

PYLOROSPASM • BILIARY DYSKINESIA • PANCREATITIS • URETERAL AND URINARY BLADDER SPASM • GASTRITIS

PEPTIC ULCER • FUNCTIONAL HYPERMOTILITY • IRRITABLE COLON

Professional Liability Insurance
(MALPRACTICE)

Policy and Rates Approved
by the
TENNESSEE MEDICAL ASSOCIATION



Standard Coverage That SAVES YOU 35%

Class 1—Physicians doing no surgery

Class 2—Physicians doing minor surgery or assisting in major surgery on own patients

Class 3—Surgeons - General Practitioners who perform major surgery or assist in major surgery on other than their own patients and specialists: Anesthesiologists, Cardiologists (including catheterizations, but not including surgery), Ophthalmologists and Proctologists

Class 4—Surgeons - Specialists

Limits	Class 1	Class 2	Class 3	Class 4
5/15	$ 37.05	$ 46.15	$ 89.05	$133.25
10/30	50.02	62.30	120.22	179.89
25/75	63.36	78.92	152.28	227.86
50/150	70.02	87.22	168.30	251.84
75/225	74.10	92.30	178.10	266.50
100/300	76.32	95.07	183.44	274.50
200/300	79.66	99.22	191.46	286.49
300/300	81.88	101.99	196.80	294.48
200/500	88.77	108.61	202.13	298.49
500/500	93.59	114.61	213.71	315.81
500/1 million	114.70	135.99	236.37	339.81
1 million/1 million	120.25	142.91	249.73	359.79

1. Partnership liability, increase premium for each partner by 20%.
2. X-Ray Therapy and Shock Therapy quotations made on request.
3. Premises Liability (bodily injury, property damage and medical payments) Minimum premium $8.00.

FARRINGER & CO.
Phone 524-7335
Knoxville, Tennessee

FARRINGER & CO.
Phone 276-7331
Memphis, Tennessee

FAW & SHERROD
Phone 926-8164
Johnson City, Tennessee

INGLE-KNOX INSURANCE AGENCY
Phone 265-4541
Chattanooga, Tennessee

LIPSCOMB & PITTS CO.
Phone 272-2515
Memphis, Tennessee

Your policy backed by Assets over **$42,000,000.00**

Shelby Mutual Insurance Company
of Shelby, Ohio

*20% off on Hospital—Professional Liability

For Information on Hospital-Professional Liability and other coverages, please contact one of the agents listed.

REFER EYE PATIENTS
TO AN
EYE PHYSICIAN

By so doing, you will be assured of a complete diagnosis of your patients' eyes.

Guild Opticians complete the cycle for Professional Service.

GUILD OF PRESCRIPTION OPTICIANS OF AMERICA

BE SAFE—BE SURE

SEE

YOUR GUILD OPTICIAN

FOR

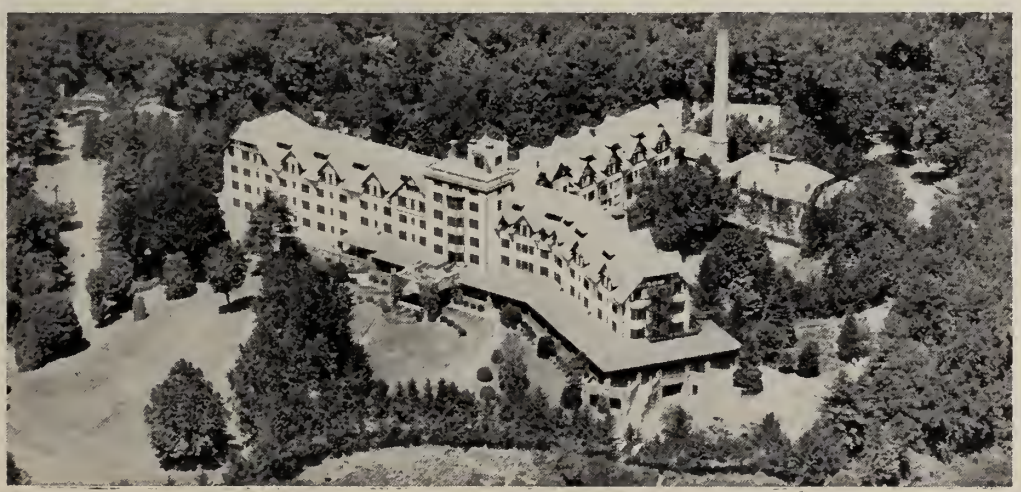
THE BEST SERVICE

EYE PHYSICIANS: Please Note—

Your prescriptions for glasses are "SAFE" when referred to a Guild Optician.
Bound by the code of Ethics to uphold the highest standards in optical service.

APPALACHIAN HALL
Established 1916

Asheville North Carolina



An Institution for the diagnosis and treatment of Psychiatric and Neurological illnesses, rest, convalescence, drug and alcohol habituation.
Insulin Coma, Electroshock and Psychotherapy are employed. The Institution is equipped with complete laboratory facilities including electroencephalography and X-ray.
Appalachian Hall is located in Asheville, North Carolina, a resort town, which justly claims an all around climate for health and comfort. There are ample facilities for classification of patients, rooms single or en suite.

WM. RAY GRIFFIN, JR., M.D. MARK A. GRIFFIN, SR., M.D.
ROBERT A. GRIFFIN, M.D. MARK A. GRIFFIN, JR., M.D.

For rates and further information write
Appalachian Hall, Asheville, N. C.

Tennessee Medical Association's

Exclusively Approved

GROUP DISABILITY INCOME PROGRAM

Administered By

Smith, Reed, Thompson & Ellis Co.

1322 Nashville Trust Building
NASHVILLE 3, TENNESSEE
Phone 255-7625

WILLIAM H. ELLIS, C. L. U. MGR.
THOMAS G. HENRY

ASSOCIATES

Alden H. Smith, C. L. U.

Arthur D. Reed, C. L. U.

Joe Thompson, Jr., C. L. U.

Alden H. Smith, Jr., C. L. U.

E. Dan Smith, II

Underwritten By

Commercial Insurance Company

Newark, New Jersey



Outwardly calm...but what goes on inside?

Appearances on the outside do not necessarily suggest what goes on inside. This is particularly true of the ulcer patient, who may appear jolly and unruffled to his neighbors, but presents to you the classic symptoms: organic and functional disorders of the G.I. tract, associated with anxiety and tension.

Consider, when you see him next, the value of PATHILON® SEQUELS® with Phenobarbital, which provides sustained anticholinergic protection from spasm and pain in the target areas, as well as sustained phenobarbital action against triggering anxiety. The controlled release of the active ingredients in the SEQUELS® formulation means protective medication day and night.

Effective in peptic ulcer, intestinal colic, ileitis, esophageal spasm, spastic colon, alcohol-induced G.I. upsets, gastric hypermotility and anxiety neurosis with G.I. symptoms. Should be used as adjunct to other measures.

Side Effects (due to tridihexethyl chloride): dry mouth, blurring of vision, constipation.

Contraindications: urinary bladder neck obstruction; glaucoma; obstructive congenital anomalies of the gastrointestinal tract; pyloric obstruction; congenital megacolon; and stenosing gastric or duodenal ulcer with significant gastric retention.

Also available, without phenobarbital, as PATHILON® Tridihexethyl chloride SEQUELS® 75 mg.

Pathilon® Sequels® with Phenobarbital Sustained Release Capsules

Each capsule contains: Tridihexethyl chloride, 75 mg., and phenobarbital, 45 mg.

LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, New York

Lederle

313-4

Remember, Doctor—

It's been

Tafel Surgical Supply Co., Inc.

SINCE 1889

for

Drugs, Orthopedic, Surgical

Supplies & Equipment

1203 Church Street

Nashville, Tennessee



Ideal Location for M.D. in Morristown, Tennessee, next door to newly expanding multi-million dollar hospital. Office building, with or without equipment for lease—reasonable. Contact Massengill Agency, 201 East First Street, Morristown, Tennessee. Phone 586-6653.



■ **PETN (pentaerythritol tetranitrate) to increase oxygen supply**

■ **plus meprobamate to decrease anxiety and tension**

Unlike phenobarbital, meprobamate is *not* cumulative and does *not* cause depression.

Side effects: Pentaerythritol tetranitrate may infrequently cause nausea and mild headache, usually transient. Slight drowsiness may occur with meprobamate and, rarely, allergic reactions. **Precautions:** Meprobamate may increase effects of excessive alcohol. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction. **Contraindications:** Like all nitrate-containing drugs, 'Miltrate' should be given with caution in glaucoma. *Complete product information available in the product package, and to physicians upon request.* **Dosage:** 1 to 2 tablets, *before meals* and at bedtime. Individualization required. **Supplied:** Bottles of 50 tablets.

CML-1055

MILTRATE®

meprobamate 200 mg.+ pentaerythritol tetranitrate 10 mg.

WALLACE LABORATORIES / *Cranbury, N. J.*



Whether you're a teacher correcting exams. A student cramming for them. A housewife cleaning up after the kids. Or a businessman working late at night. Whoever you are, things go better when you pause and refresh with ice-cold Coca-Cola.



Out-Patient Clinic and Offices

HILL CREST SANITARIUM

Established in 1925

FOR NERVOUS AND MENTAL DISEASES
AND ADDICTION PROBLEMS

why does 150 mg.



do more than 250 mg.



of other tetracyclines?

Because it has up to 3½ times the *in vitro* antibacterial activity[1] ...combined with lower rate of decay in serum, slower renal clearance... a favorable depot effect, resulting from protein binding...all providing rapid, higher and sustained *in vivo* activity with as much as 2 days' extra activity.

DECLOMYCIN®

DEMETHYLCHLORTETRACYCLINE HCl

Effective in a wide range of everyday infections—respiratory, urinary tract and others—in the young and aged—the acutely or chronically ill—when the offending organisms are tetracycline-sensitive. **Side Effects** typical of tetracyclines which may occur: glossitis, stomatitis, proctitis, nausea, diarrhea, vaginitis, dermatitis, overgrowth of nonsusceptible organisms. Also: photodynamic reaction (making avoidance of direct sunlight advisable) and, very rarely, anaphylactoid reaction. Reduce dosage in impaired renal function. The possibility of tooth discoloration during development should be considered in administering any tetracycline in the last trimester of pregnancy, in the neonatal period, and in early childhood. *Capsules,* 150 mg. and 75 mg. of demethylchlortetracycline HCl. *Average Adult Daily Dosage:* 150 mg. q.i.d. or 300 mg. b.i.d. 1. Sweeney, W. M.; Dornbush, A. C., and Hardy, S. M.: Demethylchlortetracycline and Tetracycline Compared. Relative *in vitro* Activity and Comparative Serum Concentrations During 7 Days of Continuous Therapy. *Amer. J. Med. Sci.* 243:296 (Mar.) 1962.

LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, New York

Lederle

7516 3



Doctor, you can take it with you!



THE BURDICK EK-III **DUAL-SPEED ELECTROCARDIOGRAPH**

- 26½ pounds light, including all accessories and carrying case! Ideal for office or bedside use
- 25 or 50 mm. speed — an accurate record for an accurate diagnosis
- frequency response greatly in excess of minimum A.M.A. standards
- top-loading paper drive eliminates tedious paper-threading adjustments

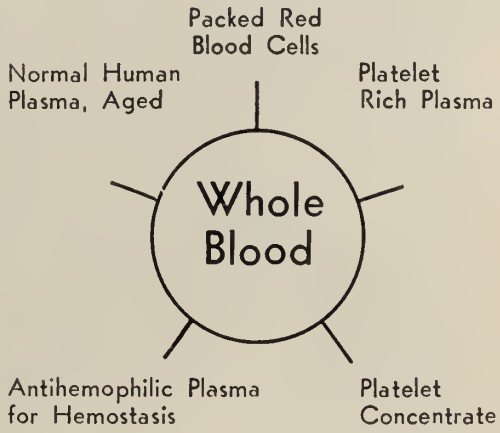
Burdick

THE BURDICK CORPORATION
MILTON, WISCONSIN
Branch Offices: New York • Chicago • Atlanta • Los Angeles
Dealers in all principal cities

KAY SURGICAL, INC.
1144 Madison Ave. Memphis, Tenn.

Follow the trend to

BLOOD COMPONENT THERAPY



Best for the patient and More Economical.

All available from

BLOOD BANK FOUNDATION

1921 Broadway ALpine 4-3551
NASHVILLE, TENNESSEE



A SURGICAL INSTRUMENT OIL

Scientifically Developed for the

MEDICAL PROFESSION

Apply as indicated; a few drops especially in locks and serrations of instruments, or other delicate mechanisms. Leave a thin film over the entire instrument to prevent rust in disuse or storage. This highly refined clear instrument oil will not clog, gum or turn rancid. Non-corrosive.

4-oz. can 75c
Pt. bottle with dispensing can $2.50
Qt. bottle with dispensing can $4.00
Plus post.

White Surgical Supply Co.
SURGICAL SUPPLIES & ACCESSORIES
515 West Church Ave. Knoxville 7, Tennessee
Telephone 3-1186

Gyne-Cytology Laboratory, Inc.
M. Wm. Rubenstein, M.D.
(PAPANICOLAOU METHOD)
RAPID SERVICE
Mailing Kits On Request
Suite 422 - 636 Church Street
EVANSTON, ILLINOIS 60201

ACCEPTED AMERICAN MEDICAL ASSN.

HOMOGENIZED
VITAMIN D MILK
PRODUCES SOFT CURD
(400 U.S.P. Units Vitamin D Per Quart)

"A" Grade Sealtest MILK Phone AL 5-6451

Fortified Fat Free Milk
(2000 Units Vitamin A—400 Units Vitamin D)
NASHVILLE PURE MILK CO.

List of Advertisers in This Issue

American Cyanamid Company VI-VII, IX, XIII, XXII-XXIII, XXXI, XXXIV
Ames Co., Inc. XXXVII
Appalachian Hall XXIX
Blood Bank Foundation XXXV
Brayten Pharmaceutical Co. XVII
Burroughs Wellcome & Co. XIV
Coca-Cola XXXIII
Farringer & Company XXVIII
Guild Opticians XXIX
Gyne-Cytology Laboratory, Inc. XXXVI
Hill Crest Sanitarium XXXIII
Kay Surgical, Inc. XXXV
Lilly, Eli and Co. I, XXVI
Mutual Benefit Life Ins. Co. XVIII
Nashville Pure Milk Co. XXXVI
Nashville Surgical Supply Co., Inc. XX
Parke-Davis and Company II
Robins, A. H. Co. X, XI
Roche Laboratories XXXVIII
St. Albans XII
Searle, G. D. & Co. XXVII
Smith, Kline & French Laboratories XVI
Smith, Reed, Thompson & Ellis Co. XXX
Saunders, W. B. Co. III
Tafel Surgical Supply Co., Inc. XXXII
Tennessee Valley Medical Assembly VIII
Wallace Laboratories XV, XIX, XXI, XXII, XXIV-XXV
White Surgical Supply Co. XXXVI
Winthrop Laboratories V



"the same old story, doctor—indigestion"

The patient's complaint is indigestion...especially of intolerance to fried foods...aggravated by stress. You diagnose functional G.I. disturbance and associated stress...as manifested by flatulence, "nervous" indigestion and constipation. Prescribe

DECHOLIN-BB®

(Hydrocholeretic • Antispasmodic • Sedative, AMES)

Each Tablet Contains:

BUTABARBITAL SODIUM.....15 mg (¼ gr)
(Warning: May be habit forming) to ease nervous tension

DEHYDROCHOLIC ACID.....250 mg (3¾ gr)
to produce large volume of watery bile, hydrate the bowel contents and gently stimulate the intestinal mucosa

BELLADONNA EXTRACT.....10 mg (⅙ gr)
to reduce smooth-muscle hypertonus

Average adult dose: 1, or if needed, 2 tablets three times daily. *Precautions:* Observe patients periodically for increased intraocular pressure and barbiturate habituation or addiction. Caution drivers against possible drowsiness. *Side effects:* Dehydrocholic acid may cause transitory diarrhea; belladonna — blurred vision, dry mouth. *Contraindications:* Biliary tract obstruction, acute hepatitis, glaucoma, and prostatic hyperplasia. *Available through your regular supplier:* DECHOLIN-BB, bottles of 100 tablets. 72664

Ames Company, Inc., Elkhart, Indiana. AMES

when psychic tension mounts

Valium®
(diazepam)

useful in alleviating
— psychic tension in the common psychoneuroses
— psychic tension related to situational stress
— psychic tension intensified by concomitant somatic components



ROCHE

How to prescribe Valium (diazepam)

Indications: Valium (diazepam) is of use in dealing with anxiety reactions stemming from stressful circumstances or whenever somatic complaints are concomitants of emotional factors. It is useful in psychoneurotic states manifested by anxiety, tension, fear and fatigue. Valium (diazepam) may also be useful in acute agitation due to alcohol withdrawal. Valium (diazepam) may be of use to alleviate muscle spasm associated with cerebral palsy and athetosis.

Dosage and administration	*Usual daily dose*
Mild to moderate psychoneurotic reactions: Manifested by anxiety-tension alone or with depressive symptomatology, agitation, restlessness, psychophysiological disturbances	2 mg to 5 mg, 2 or 3 times daily
Severe psychoneurotic reactions: Where severe anxiety, fear, agitation, aggression or hostility exist alone or with depressive symptoms	5 mg to 10 mg, 3 or 4 times daily
Alcoholism: As an aid in symptomatic relief of acute agitation, tremor, impending or acute delirium tremens and hallucinosis	10 mg, 3 or 4 times during the first 24 hours; reducing to 5 mg, 3 or 4 times daily as needed
Muscle spasm associated with cerebral palsy or athetosis	2 mg to 10 mg, 3 or 4 times daily

Contraindications: Valium (diazepam) is contraindicated in infants, patients with a history of convulsive disorders or patients with a history of glaucoma.

Warning: Valium (diazepam) is not of value in dealing with psychotic patients manifesting anxiety and should be avoided when there is reason to believe the patient is psychotic.

Precautions: In elderly or debilitated patients, it is important to limit the dosage to the smallest effective amount to preclude the development of ataxia or oversedation (not more than 1 mg, 1 or 2 times daily initially, to be increased gradually as needed and tolerated). As is true of all CNS-acting drugs, until the correct maintenance dosage is established, patients receiving Valium (diazepam) should be advised against possibly hazardous procedures requiring complete mental alertness or physical coordination. Dr automobile during the period of Valium (diazepam) therapy is not mended. In general, the concurrent administration of Valium (diazep other psychotropic agents is not recommended. If such combination is used, careful consideration should be given to the pharmacology agents to be employed with Valium (diazepam) — particularly with compounds which may potentiate the action of Valium (diazepam as phenothiazines, barbiturates, MAO inhibitors and other antidep

Since Valium (diazepam) has a central nervous system depressan patients should be advised against the simultaneous ingestion of alc other central nervous system depressant drugs during Valium (di therapy. Safe use of Valium (diazepam) during pregnancy has n established. The usual precautions are indicated when Valium (diaz used in the treatment of anxiety states where there is any evidenc pending depression; particularly the recognition that suicidal tenden be present and protective measures may be necessary. The usual pre in treating patients with impaired renal or hepatic function shoul served.

Side effects: In clinical use, fatigue, drowsiness and ataxia have e ported; in most instances these are dose-related and may be av proper dosage adjustment. Mild nausea and dizziness may occur on As with any new agent, when it is administered for protracted p time, periodic blood counts and liver function tests are advisable cessation after prolonged overdosage may, in some patients, produ drawal symptoms (*e.g.*, convulsions, tremor, abdominal and muscle vomiting, sweating) similar to those seen with barbiturates, mepr and Librium® (chlordiazepoxide HCl). Changes in EEG patterns h observed in patients during and after Valium (diazepam) treatm

Paradoxical reactions, such as excitement, depression, stimulation, s turbances, acute hyperexcited states and hallucinations have been Other side effects noted have been blurred vision, diplopia, head continence, slurred speech, tremor and skin rash.

Valium (diazepam) is available as 5-mg and 2-mg tablets. For con and economy in prescribing, both strengths are supplied in bottl

ROCHE LABORATORIES
Division of Hoffmann - La Roche Inc / Nutley, N. J. 07110

THE JOURNAL OF THE TENNESSEE MEDICAL ASSOCIATION

LIBRARY OF THE MEDICAL SOCIETY

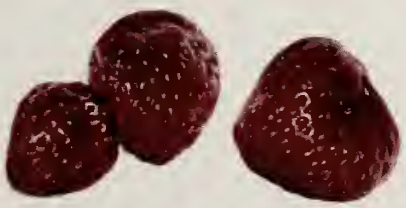
12TH ANNUAL
TENNESSEE VALLEY MEDICAL ASSEMBLY
SEPTEMBER 28-29, 1964
TIVOLI THEATER, CHATTANOOGA, TENNESSEE

SEPTEMBER, 1964

Volume 57 **Number 9**

of Contents on Page IV
to Advertisers on Page XLIV

tempting strawberry taste treat for your iron-deficient patients



Zentron® Chewable

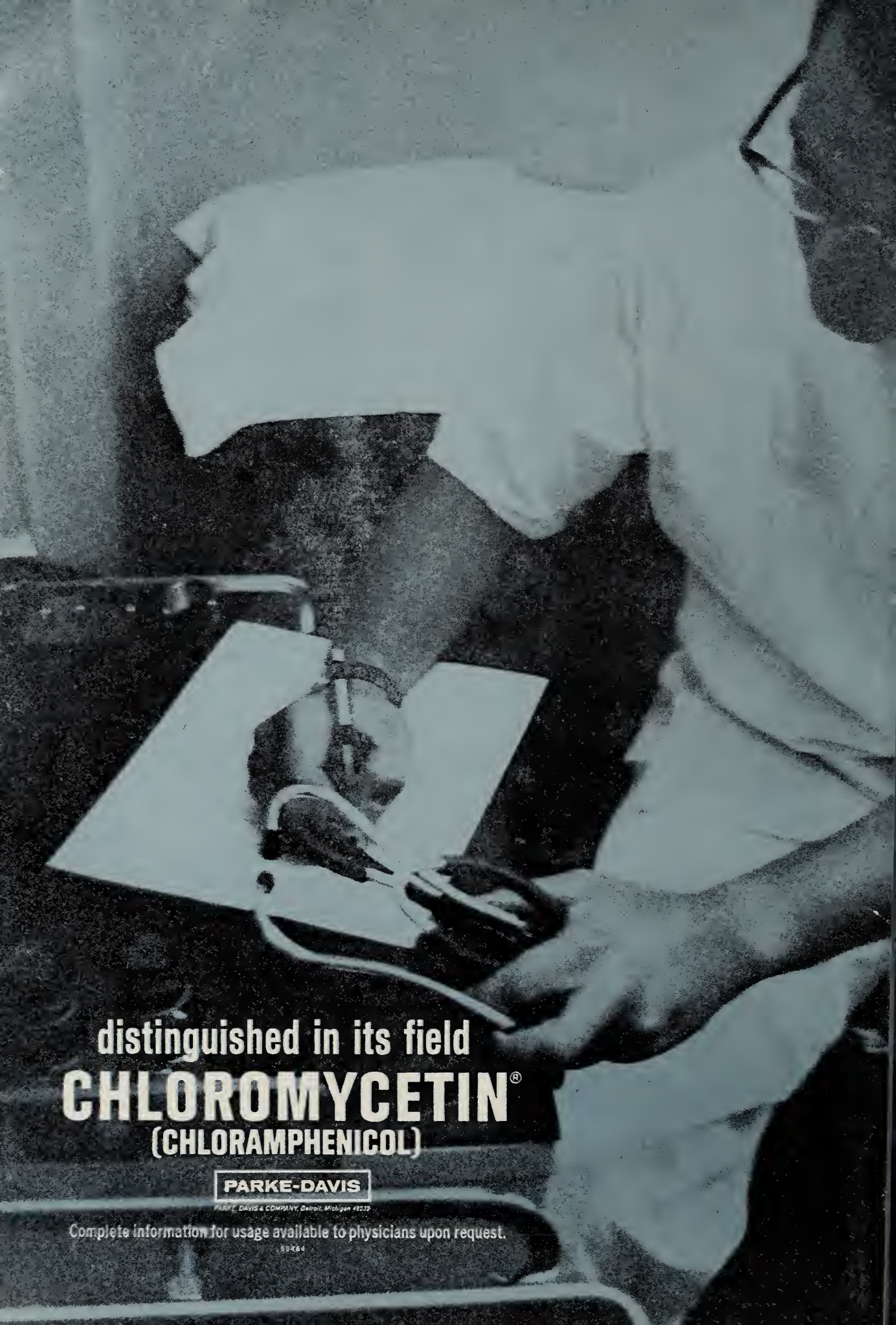
Iron, Vitamin B Complex, and Vitamin C

Combines iron with B complex vitamins in a chewable tablet

Additional information available upon request.
Eli Lilly and Company, Indianapolis 6, Indiana.

Lilly

400137


distinguished in its field
CHLOROMYCETIN®
(CHLORAMPHENICOL)
PARKE-DAVIS
PARKE, DAVIS & COMPANY, Detroit, Michigan 48232
Complete information for usage available to physicians upon request.
93464



In Chronic Illness: B and C vitamins are therapy

An imbalance of water-soluble vitamins and chronic illness often go hand in hand. STRESSCAPS, containing therapeutic quantities of vitamins B and C, is formulated to meet the increased metabolic demands of patients with physiologic stress. In chronic illness, as with many stress conditions, STRESSCAPS vitamins are therapy.

Each capsule contains:

Vitamin B_1 (Thiamine Mononitrate)	10 mg.
Vitamin B_2 (Riboflavin)	10 mg.
Niacinamide	100 mg.
Vitamin C (Ascorbic Acid)	300 mg.
Vitamin B_6 (Pyridoxine HCl)	2 mg.
Vitamin B_{12} Crystalline	4 mcgm.
Calcium Pantothenate	20 mg.

Recommended intake: Adults, 1 capsule daily, for the treatment of vitamin deficiencies. Supplied in decorative "reminder" jars of 30 and 100; bottles of 500.

STRESSCAPS®

Stress Formula Vitamins Lederle

FOR PROFESSIONAL RECOMMENDATION ONLY

Lederle LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, N. Y.

7514-4

The Journal of the TENNESSEE MEDICAL ASSOCIATION

Published Monthly

By Tennessee Medical Association

OFFICE OF PUBLICATION, 112 LOUISE AVENUE, NASHVILLE, TENNESSEE 37203

Second Class Postage Paid at Nashville, Tennessee

Volume 57
No. 9

SEPTEMBER, 1964

Per Year, $5.00
Single Copy, 50 Cents

Published Monthly

Contents

The Many Faces of Diabetic Keto-Acidosis, Richard C. Sexton, Jr., M.D., Knoxville, Tenn. . . . 357

Recent Advances in Immunization of Children, Sarah H. W. Sell, M.D., Nashville, Tenn. . . . 362

A-V Syndrome, I. Lee Arnold, M.D., Chattanooga, Tenn. . . . 367

Clinical Evaluation of the Dyspneic Patient, Richard A. Obenour, M.D., Knoxville, Tenn. . . . 371

Current Programs of Orthopedics Overseas, Paul Spray, M.D., Oak Ridge, Tenn. . . . 373

Technic and Treatment of Tumors of the Head and Neck by Temporal Artery Infusion, Davis R. Watson, M.D., and Thomas A. Maguda, M.D., Memphis, Tenn. . . . 375

Staff Conference . . . 378

President's Letter . . . 384

Editorial . . . 385

Deaths . . . 385

Programs and News of Medical Societies . . . 385

National News . . . 386

Medical News in Tennessee . . . 387

Personal News . . . 389

Book Review . . . 389

Announcements . . . 390

Officers of TMA . . . 392

Instructions to Contributors

Manuscripts submitted for consideration for publication in the Journal of the Tennessee Medical Association should be addressed to the Editor, Dr. R. H. Kampmeier, Vanderbilt University Hospital, Nashville 12, Tennessee.

Manuscripts must be typewritten on one side of letter-weight paper. Either double or triple spacing and wide margins must be provided to facilitate editing which will be legible for the printer.

Bibliographic references should not exceed ten or twelve in number documenting key publications. They should appear at the end of the paper. The bibliographic references must conform to the style used in the American Medical Association publications, as,—Alais, F. G.: What Is Known About It, J. Tennessee M. A., 35:132, 1950.

Illustrations must be mounted on white cardboard and be numbered. The editor will determine the number, if any, of illustrations to be used. Additional illustrations will be charged to the author. The author's name should appear on the back of each illustration.

If reprints are desired, the requested number should be indicated in the letter accompanying the manuscript. The author will be billed by the publisher.

DEVOTED TO THE INTERESTS OF THE MEDICAL PROFESSION OF TENNESSEE
R. H. KAMPMEIER, M.D., Editor
This Association Does Not Officially Indorse Opinions Presented in Different Papers Published herein
Copyright, 1964, by the Tennessee Medical Journal



NTz Nasal Spray gives prompt, dependable decongestion of the nasal membranes for fast symptomatic relief of hay fever. The first spray shrinks the turbinates, restores nasal ventilation and stops mouth breathing. The second spray, a few minutes later, improves sinus ventilation and drainage. Excessive rhinorrhea is reduced.

NTz Nasal Spray also provides decongestive relief for head colds, perennial rhinitis and sinusitis. Supplied in leakproof, pocket-size, squeeze bottles of 20 ml. and in bottles of 30 ml. with dropper.

NTz® Nasal Spray

NTz is more than a simple vasoconstrictor. It contains Neo-Synephrine® HCl 0.5%—the efficacy of which is unexcelled—to shrink nasal membranes and provide inner space; Thenfadil® HCl 0.1% for topical antiallergic action; and Zephiran® Cl 1:5000 (antibacterial wetting agent) to promote the spread of the decongestant components to less accessible nasal areas.

NTz is well tolerated and does not harm respiratory tissues.

NTz, Neo-Synephrine (brand of phenylephrine), Thenfadil (brand of thenyldiamine) and Zephiran (brand of benzalkonium as chloride, refined), trademarks reg. U. S. Pat. Off. 1795M

Winthrop Winthrop Laboratories
New York 18, N. Y.

RECOGNIZE THIS PATIENT?



"The arthritis doesn't get any better... I can't get out. I never see anybody. It's awful to be sick... I was always so active."

When you recognize depression and anxiety related to an organic condition
—*add 'Deprol' to your therapy*

Typical organic conditions in which 'Deprol' helps control related depression and anxiety:

cardiovascular disorders ■ arthritis ■ cancer ■ menopause ■ alcoholism ■ obesity ■ asthma, hay fever and related allergies ■ chronic infectious diseases ■ dermatoses ■ G.I. disorders, and many other debilitating or life-threatening illnesses

Advantages of 'Deprol'

1. By relieving both depression and anxiety, 'Deprol' lifts the mood of the depressed patient without the agitation and "jitters" that often accompany "energizer" therapy alone.
2. 'Deprol' relaxes physical tensions, restores normal sleep and revives interest in food.
3. 'Deprol' acts rapidly—patients often respond within a week or two.
4. 'Deprol' is compatible with drugs used to treat co-existing organic conditions.
5. 'Deprol' is relatively nontoxic and free of side effects.

Deprol®

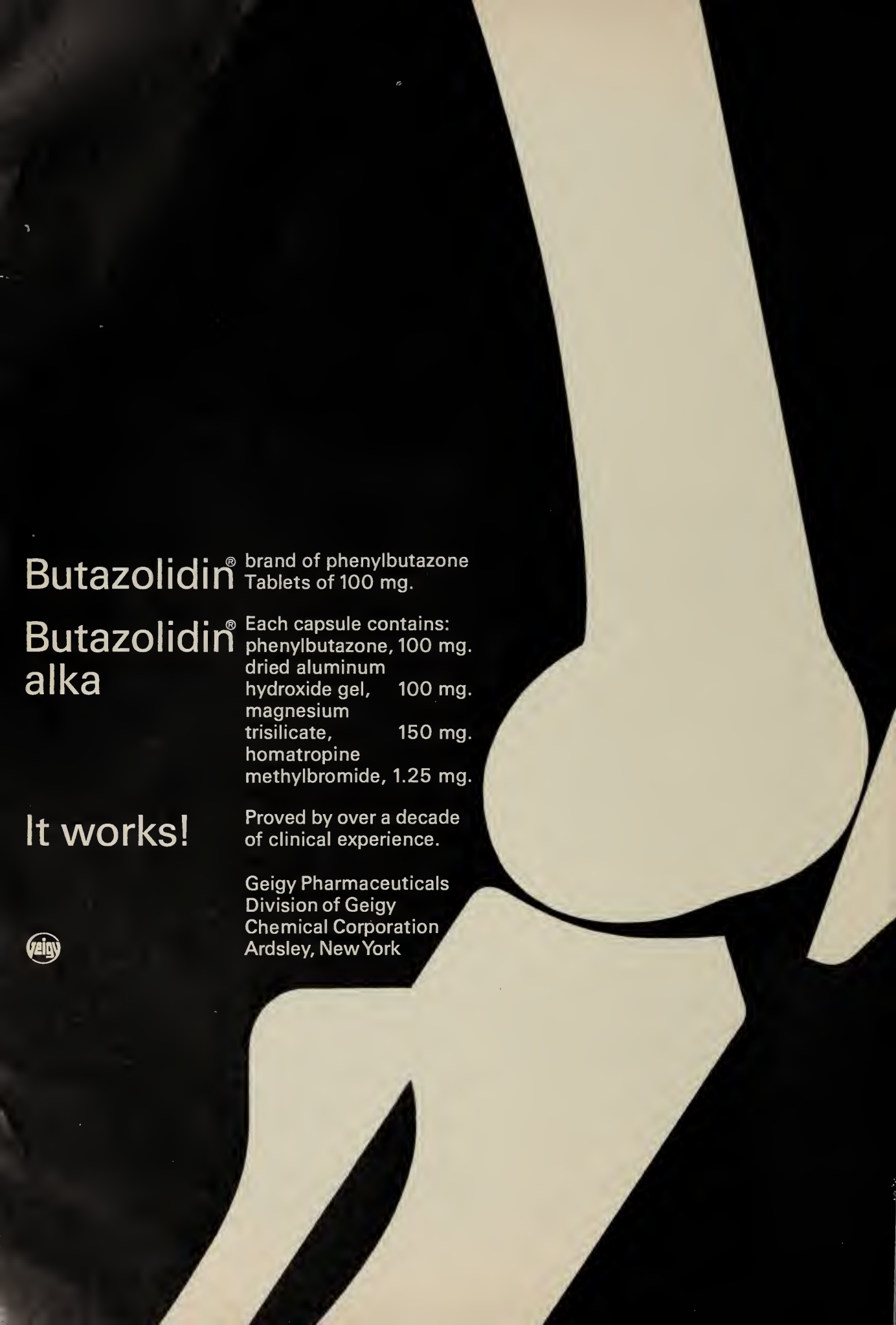
meprobamate 400 mg. + benactyzine hydrochloride 1 mg.

Side effects: Slight drowsiness and, rarely, allergic or idiosyncratic reactions, due to meprobamate, and occasional dizziness or feeling of depersonalization in higher dosage, due to benactyzine, may occur. **Contraindications:** Previous allergic or idiosyncratic reactions to meprobamate contraindicate subsequent use of meprobamate or meprobamate-containing drugs. **Precautions:** Should administration of meprobamate cause drowsiness, the dose should be reduced. Operation of motor vehicles or machinery or other activity requiring alertness should be avoided if these symptoms are present. Effects of excessive alcohol may possibly be increased by meprobamate. Although suicides with 'Deprol' have not been reported, prescribe cautiously and in small quantities to patients with suicidal tendencies. Massive overdosage of meprobamate may produce lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse. Even though it has not been reported with 'Deprol', consider the possibility of dependence, particularly in patients with history of drug or alcohol addiction; withdraw gradually after prolonged use at high dosage. *Complete product information available in the product package, and to physicians on request.*

Usual adult dosage: 1 tablet t.i.d. or q.i.d. May be increased gradually, as needed, to 6 tablets daily. With establishment of relief, may be gradually reduced to maintenance levels. **Supplied:** Light-pink, scored tablets Bottles of 50.

WALLACE LABORATORIES / *Cranbury, N. J.*

CD-801


Butazolidin® brand of phenylbutazone
Tablets of 100 mg.
Butazolidin® alka
Each capsule contains:
phenylbutazone, 100 mg.
dried aluminum hydroxide gel, 100 mg.
magnesium trisilicate, 150 mg.
homatropine methylbromide, 1.25 mg.
It works!
Proved by over a decade of clinical experience.
Geigy Pharmaceuticals
Division of Geigy Chemical Corporation
Ardsley, New York
Geigy

"If food makes him feel good, it is not at all surprising that he will turn to it when times are tough, and his tension mounts."[1]



ESKATROL® Trademark

Each capsule contains Dexedrine® (brand of dextroamphetamine sulfate), 15 mg., and Compazine® (brand of prochlorperazine), 7.5 mg., as the maleate.

SPANSULE®

brand of sustained release capsules

controls appetite all day long with a single morning dose

relieves the emotional stress that causes overeating

Brief Summary of Principal Side Effects, Cautions and Contraindications

Side effects (chiefly nervousness and insomnia) are infrequent, and usually mild and transitory.

Cautions: 'Eskatrol' *Spansule* capsules should be used with caution in the presence of severe hypertension, advanced cardiovascular disease, or extreme excitability. There is a possibility, though little likelihood, of blood or liver toxicity or neuromuscular reactions (extrapyramidal symptoms) from the phenothiazine component in 'Eskatrol' *Spansule* capsules.

Contraindications: Hyperexcitability, hyperthyroidism.

Before prescribing, see SK&F Product Prescribing Information.

Supplied: Bottles of 50 capsules.

1. Dorfman, W., and Johnson, D.: *Overweight Is Curable*, New York, The Macmillan Company, 1948, p. 16.

Smith Kline & French Laboratories



In Sprains, Strains and Muscle Spasm, 'Soma' Compound

numbs the pain...not the patient

A potent analgesic and a superior muscle relaxant

1. A sprain or fracture is not a big clinical problem—but it does hurt. And if there is housework to do and kids to mind, the patient needs something to numb the pain.

2. A.P.C. compounds have limited usefulness; and the patient can buy them without your prescription. Unfortunately, most of them are too mild to be effective for sprains—and more potent products too often make the patient feel 'dopey'.

3. 'Soma' Compound is ideal in these cases. Since it contains both 'Soma' (carisoprodol) and acetophenetidin it is both a potent analgesic and a superior muscle relaxant; it also contains caffeine to offset any drowsiness *("numbs the pain...not the patient")*.

4. Why not try 'Soma' Compound? Dosage is 1 or 2 tablets q.i.d. For more severe pain, try 'Soma' Compound + Codeine. Dosage: 1 or 2 tablets q.i.d.

5. Hypersensitivity to carisoprodol may occur rarely. Codeine may produce addiction, nausea, vomiting, constipation or miosis.

Soma® Compound

carisoprodol 200 mg., acetophenetidin 160 mg., caffeine 32 mg.

Soma® Compound + Codeine

carisoprodol 200 mg., acetophenetidin 160 mg., caffeine 32 mg., codeine phosphate 16 mg. (Warning—may be habit forming.)

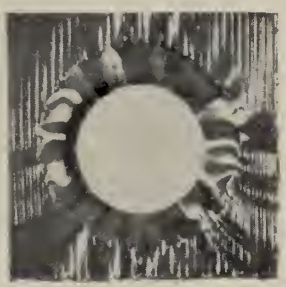
®WALLACE LABORATORIES / *Cranbury, N.J.*

CSO-9193

GEL-KAM

THIS TABLET OFFERS 3 SIGNIFICANT ADVANTAGES THE NAME . . .

GEL-KAM



1. EFFECTIVE LONGER
Gel-Kam ingredient Dihydroxy Aluminum Aminoacetate maintains gastric pH between 3.5 and 4 for a significantly longer time than the corresponding dose of ordinary Aluminum Hydroxide.[1]

2. UNDISTURBED REGULARITY
Dihydroxy Aluminum Aminoacetate in combination with the other Gel-Kam ingredient does not cause constipation.[1]

3. PLEASANT TASTING
Smooth, non gritty, pleasant tasting Gel-Kam tablets melt or dissolve quickly. The patient can easily chew several Gel-Kam tablets if unusually large amounts of antacid medication are needed.

COMPOSITION: Each Table Contains: Dihydroxy Aluminum Aminoacetate . . . 4.7 gr. Magnesium Hydroxide . . . 3 gr. **DOSE:** One or two tablets 1 to 2 hours after meals and upon retiring, or as prescribed by the physician. **INDICATIONS:** Antacid and buffer for gastric hyperacidity and peptic ulcer. **CAUTIONS AND SIDE EFFECTS:** No significant contraindications exist to the use of Gel-Kam tablets, except that it should not obviate the need for other treatment and medical supervision in peptic ulcer. Packed in plastic strip. 100 tablets to a carton and 500 tablet bottles. Professional samples and literature available.

[1](Journal of Gastroenterology, Vol. 29, page 304)

FTP **First Texas *Pharmaceuticals, Inc.***
DALLAS • ATLANTA • SINCE 1901



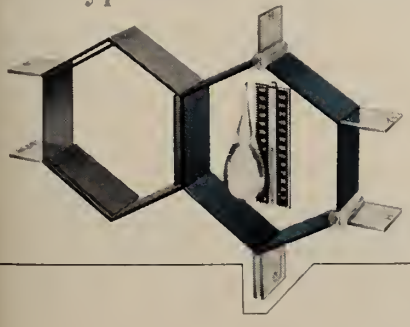
Just turned hypertensive

A 15 mm. Hg drop in diastolic pressure would also suit her very well

For suitably gradual, physiologic hypotensive treatment



HYDROMOX®
QUINETHAZONE·TABLETS
antihypertensive diuretic



HYDROMOX Quinethazone is excellent for use in early hypertension. Extremely well tolerated, the average reported reduction in diastolic pressure is 15 mm. Hg,[1,2] just right for patients with mild to moderate diastolic elevations. Systolic pressure lowered accordingly. A convenient, single daily dose of one to two 50 mg. tablets is usually sufficient.

INDICATED in hypertension with or without edema, and in all types of edema involving salt retention. May be helpful in some cases of lymphedema, idiopathic edema and edema due to venous obstruction.

SIDE EFFECTS: Skin rash (rare), gastrointestinal disturbances, weakness and dizziness, seldom so severe that drug should be stopped. Generally, the adverse effects sometimes associated with the thiazide diuretics are possible. Pre-existing electrolyte abnormalities may be aggravated.

CONTRAINDICATION: Anuria.

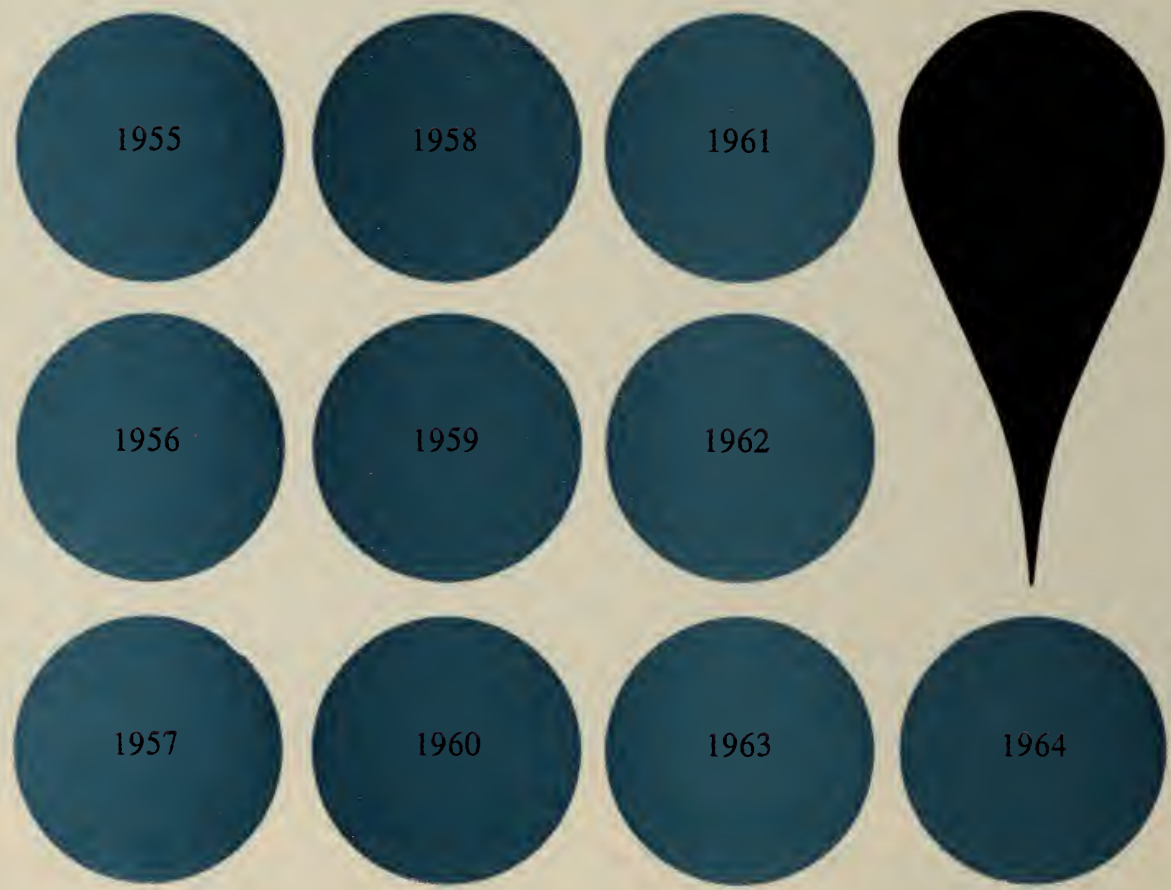
1. Steigmann, F., and Griffin, R.: Evaluation of Quinethazone, a New Diuretic. J. Amer. Geriat. Soc. 11:945 (Oct.) 1963.

2. Schwartz, M.: Office Evaluation of a New Diuretic in Patients with Hypertensive Diseases. Scientific Exhibit Presented at the Clinical Meeting of the American Medical Association, Los Angeles, California, Nov. 25-28, 1962.

LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, N.Y. Lederle

8373-4

The clear conclusion from 10 years' experience...



belongs in every practice

Miltown®
(meprobamate)

WALLACE LABORATORIES/Cranbury, N. J.

CM-2026



"Wonderful...haven't had opening in both nostrils for years"*

(clearly decongested with Dimetapp)

Dimetapp lets your "stuffed-up" patients *breathe easy again.* Each long-acting Extentab works hard for up to 10-12 hours clearing away stuffiness, turning off the drip, and unplugging congestion that accompanies upper respiratory conditions. Yet, patients seldom experience drowsiness or overstimulation. (A key to success: the Dimetapp formula.) Now that the "stuffy" season is here, keep dependable Dimetapp Extentabs on tap. They get the job done.

FOR NASAL DECONGESTION IN SINUSITIS, COLDS, U.R.I.

UP TO 10-12 HOURS' CLEAR BREATHING ON ONE TABLET

Dimetapp® Extentabs®

(Dimetane® [brompheniramine maleate], 12 mg.; Phenylephrine HCl, 15 mg.; Phenylpropanolamine HCl, 15 mg.)

BRIEF SUMMARY: Indications: Dimetapp reduces nasal secretions, congestion, and postnasal drip for symptomatic relief of colds, U.R.I., sinusitis, and rhinitis. **Side Effects:** In high dosages, occasional drowsiness due to the antihistamine or CNS stimulation due to the sympathomimetics may be observed. **Precautions:** Administer with caution in the presence of cardiac or peripheral vascular diseases and hypertension. **Contraindications:** Antihistamine sensitivity. Not recommended for use during pregnancy.

*Clinical report on file, Medical Department, A. H. Robins Co., Inc.

A. H. ROBINS CO., INC., RICHMOND 20, VA.

ANOTHER FIRST from The American Tobacco Company



FIRST

With A Charcoal-Menthol Filter!

FIRST

Menthol With "Tar" And Nicotine Test Results On The Pack!

SMOKE MONTCLAIR!

The Menthol Is In The Charcoal-Menthol Filter. Just Enough In Every Puff Makes Every Puff A Pleasure!

©1962 By The American Tobacco Company

The case of diaper rash



solved by NEW UNDERCOVER AGENT

BAKER'S **CREME**

DIAPER-SIL™



CONTAINS : panthenol, benzalkonium chloride, dimethylpolysiloxane, in a water-miscible cream base.

eliminates ammonia-splitting bacteria. The bactericidal component, benzalkonium chloride, has a proven record of effectiveness. It acts rapidly against a wide range of organisms implicated in diaper rash — including Brevibacterium ammoniagenes and Alcaligenes faecalis.

soothing, healing, protective. DIAPER-SIL also provides panthenol in a special base containing silicone . . . helps to soothe inflamed skin, protect from external irritants and gently promote healing.

TO HELP PREVENT AND TREAT DIAPER RASH, CHAFING AND SIMILAR CONDITIONS

BAKER LABORATORIES, INC. Cleveland, Ohio 44115

Subsidiary of U.S. Vitamin & Pharmaceutical Corp.



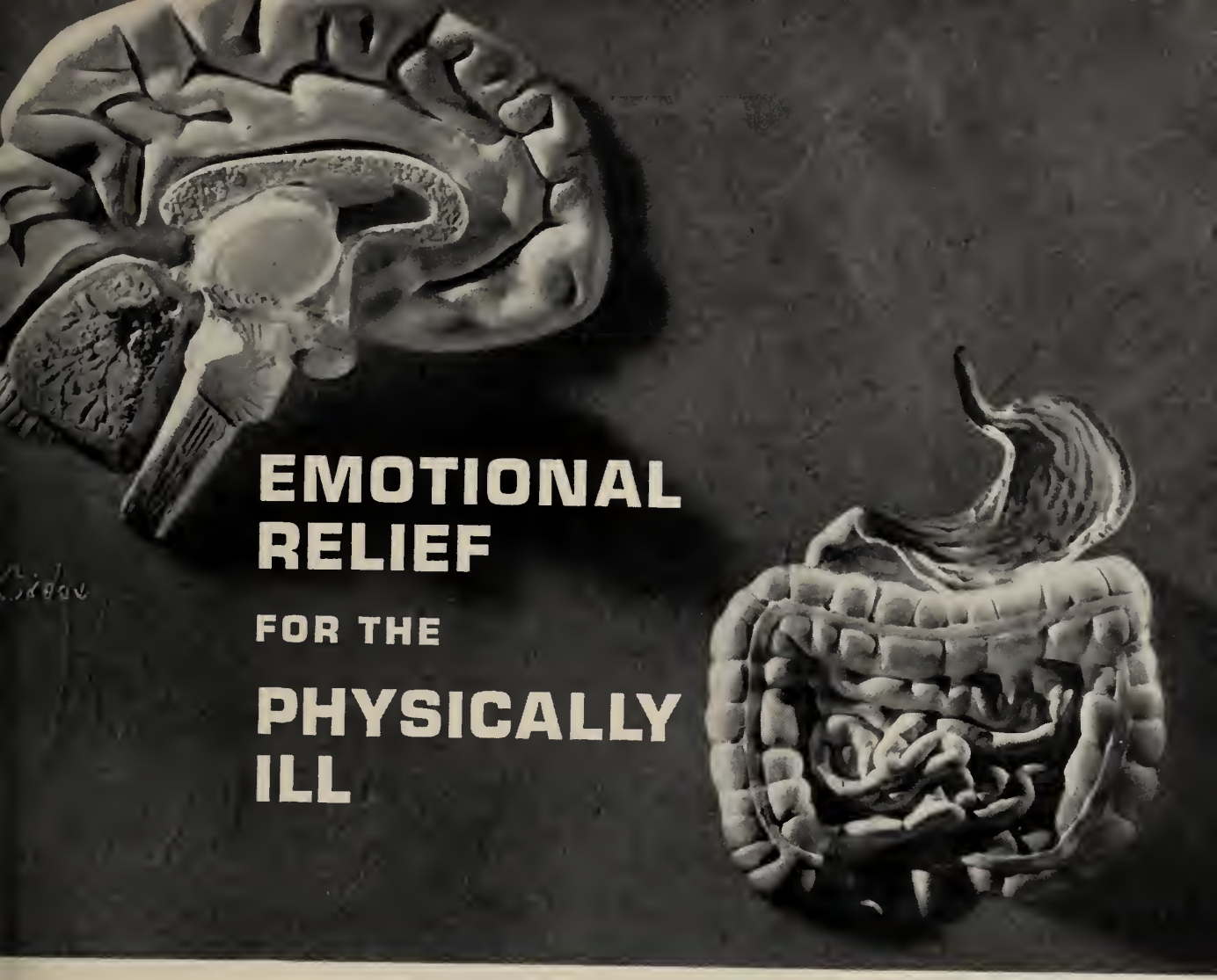
HOW TO BE SURE
your young patients get the aspirin dosage you want them to have

The answer is Orange Flavored Bayer Aspirin for Children

The dosage is 1¼ grains per tablet. Mothers place such confidence in the Bayer name. And the new orange flavor is so fresh and smooth that children take it readily. (The grip-tight cap on the bottle helps keep them from taking it on their own.)

For professional samples, just write The Bayer Company, Dept. 112, 1450 Broadway, New York 18, New York.





RELIEVES ANXIETY, APPREHENSION AND TENSION...

All day long
. . . keeps the patient calm, and the mind clear.

All night too
. . . aids restful sleep, with no barbiturate hangover.

MEPROSPAN®-400
(MEPROBAMATE 400 MG. SUSTAINED RELEASE)

Simplified, convenient dosage for emotional relief.

e effects: 'Meprospan' (meprobamate, sustained release) emarkably free of untoward reactions. Daytime drowsiness not been reported. Rare allergic or idiosyncratic reactions y occur, generally developing after 1-4 doses of the drug.

ntraindications: Previous allergic or idiosyncratic reactions meprobamate contraindicate subsequent use.

cautions: Should administration of meprobamate cause wsiness or visual disturbances, the dose should be reduced. eration of motor vehicles or machinery or other activity uiring alertness should be avoided if these symptoms are sent. Effects of excessive alcohol may possibly be increased meprobamate. Prescribe cautiously and in small quantities to patients with suicidal tendencies. Massive overdosage may produce lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction; withdraw gradually after prolonged use at high dosage.

Complete product information available in the product package, and to physicians upon request.

Usual adult dosage: One 400 mg. capsule or two 200 mg. capsules at breakfast; repeat with evening meal.

Supplied: 'Meprospan'-400 (meprobamate 400 mg.), 'Meprospan'-200 (meprobamate 200 mg.), each in sustained-release capsules. Both potencies in bottles of 30.

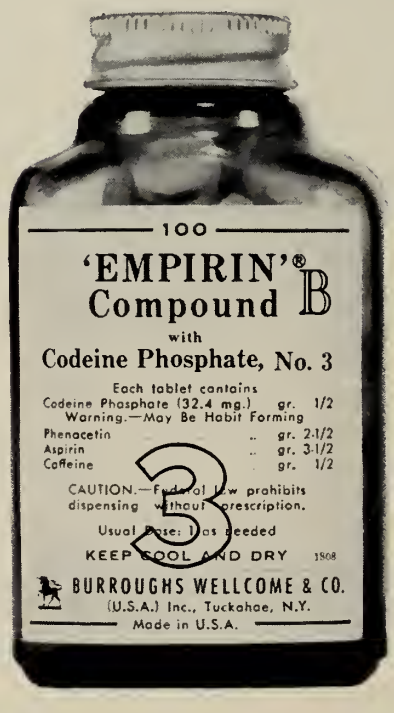
805

WALLACE LABORATORIES *Cranbury, N. J.*

ANY PAIN

not severe enough to require morphine is an indication for

'Empirin'® Compound with Codeine

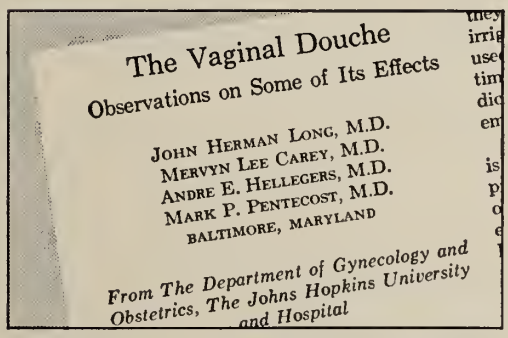


'EMPIRIN' COMPOUND with CODEINE No. 3
KEEPS THE PROMISE OF PAIN RELIEF

BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, N.Y.

A Valuable Contribution To Medical Literature

A DEFINITIVE STUDY ON DOUCHING



The Vaginal Douche

Observations on Some of Its Effects

JOHN HERMAN LONG, M.D.
MERVYN LEE CAREY, M.D.
ANDRE E. HELLEGERS, M.D.
MARK P. PENTECOST, M.D.
BALTIMORE, MARYLAND

From The Department of Gynecology and Obstetrics, The Johns Hopkins University and Hospital

A SEARCH OF MEDICAL LITERATURE REVEALS NO COMPARABLE OBJECTIVE EVALUATION OF THE SUBJECT.

The authors state at the outset,

"Each physician has his own idea of the value or harm of the vaginal douche and many have expressed such ideas in writing. Such opinions have been arrived at without any intensive investigation or observation of subjects using douches as compared to those not using them. The purpose of this study is to report our observations on three groups of patients, one taking no douches, a second douching with a medicated solution* and a third douching with plain water."[1]

1. West. J. Surg., Obsts. & Gynec.: *71*:122-127, 1963

*The medicinal powder used in this study was META CINE®, a scientifically formulated preparation containing: papain, lactose, citric acid, methyl salicylate, eucalyptol, menthol and chlorothymol.

OBSERVATIONS BASED ON EXTENSIVE AND THOROUGH EXAMINATION SCHEDULE.

"One hundred patients were selected at random, regardless of their chief complaint, from the general population attending the Out-Patient Gynecology Clinic of The Johns Hopkins Hospital. Those selected were reexamined at 1, 3, 6, 9 and 12 months after the initial visit."

"At intervals patients were switched to the regimen of another group so that comparison of the effect of douching or not douching might be made in the same individual."

Three years were required to complete the study.

An evaluation of the objective findings of the study demonstrates that douching with META CINE® had the following effects on vaginal secretion:

- increased Doderlein organisms,
- proved effective in lowering WBC counts,
- proved effective in increasing glycogen content.

META CINE® was found to be a good antagonist to vaginal discharge and irritation—and also proved effective in reducing cervicitis.

No untoward effects of douching were encountered in the study.

Reprints of the complete study and professional samples of Meta Cine are available on request.

BRAYTEN

BRAYTEN PHARMACEUTICAL COMPANY • *Chattanooga 9, Tennessee*

Nashville Surgical Supply Company

The Physician and Hospital's Complete Supply & Service Source

Physicians equipment and supplies

Hospital equipment and supplies

Laboratory equipment and supplies

THE MOST COMPLETE DRUG AND BIOLOGICAL SUPPLY SOURCE IN TENNESSEE

Distributor for Standard and Mattern X-Ray Equipment and Supplies

24-Hour Emergency Service

Nashville Surgical Supply Co., Incorporated

1911 Church St.

Nashville, Tennessee

Phone AL 5-4601

TENNESSEE VALLEY MEDICAL ASSEMBLY

(Sponsored by the Chattanooga and Hamilton County Medical Society)

TIVOLI THEATER, CHATTANOOGA, TENNESSEE

Monday, September 28, and Tuesday, September 29, 1964

12TH ANNUAL ASSEMBLY

A.M.

7:30 REGISTRATION BEGINS — MONDAY, SEPTEMBER 28, 1964

9:00 PHILIP THOREK, M.D., Prof. Surg., Cook County Graduate School of Medicine, Chicago, Ill., *"Gastrointestinal Bleeding—Diagnosis and Treatment."*

9:30 JOSEPH H. HOLMES, M.D., Prof. of Medicine, University of Colorado, Denver, Colorado, *"Treatment of Chronic Renal Disease and Renal Transplant."*

10:00-10:30 A.M.—INTERMISSION

10:30 THOMAS J. KIRBY, M.D., Cons. in Ophthalmology, Mayo Clinic, Rochester, Minn., *"External Disease of the Eye."*

11:00 GORDON MCHARDY, M.D., Clin. Prof. of Medicine, Louisiana State University Medical School, New Orleans, La., *"Critical Evaluation of Gastric Hypothermia in the Management of Duodenal Ulcer."*

11:30 JOHN C. WEED, M.D., Prof. Obstetrics and Gynecology, Tulane University, New Orleans, La., *"Management of Pelvic Relaxation In Women."*

NOON

2:00 RICHARD W. VILTER, M.D., Prof. of Medicine, University of Cincinnati College of Medicine, Cincinnati, Ohio, *"Diagnosis and Treatment of Refractory Anemias."*

2:30 FRANK D. LATHROP, M.D., EENT Dept., Lahey Clinic, Boston, Mass., *"Management of Chronic Inflammation of the Salivary Glands."*

3:00-3:30 P.M.—INTERMISSION

3:30 CORNELIUS E. SEDGWICK, M.D., Surgical Staff, Lahey Clinic, Boston, Mass., *"Portal Hypertension."*

4:00 ROBERT L. EGAN, M.D., Asst. Prof. of Radiology, University of Texas Postgraduate School of Medicine, Houston, Texas, *"Mammography in the Diagnosis of Breast Diseases."*

4:30 *Question and Answer Period.*

REGISTRATION FEE $15.00

BANQUET TICKET $7.50

TUESDAY, SEPTEMBER 29, 1964

A.M.

9:00 MURRAY M. COPELAND, M.D., Assoc. Dir., (Education), M. D. Anderson Hospital and Tumor Institute, Houston, Texas, *"The Challenge of the Biologic Aspects of Cancer of the Breast."*

9:30 JAMES G. HUGHES, M.D., Prof. of Pediatrics, University of Tennessee Medical School, Memphis, Tenn., *"The Treatment of the Epileptic Child."*

10:00-10:30 A.M.—INTERMISSION

10:30 ABRAHAM F. LASH, M.D., Prof. of Gynecology, Cook County Hospital, Postgraduate School of Medicine, Chicago, Ill., *"The Incompetent Internal os of the Cervix, A Factor in Second Trimester Abortion."*

11:00 EDGAR F. FINCHER, M.D., Prof. Neurosurgery and Head of Department, Emory University, Atlanta, Ga., *"Chronic Subdural Hematomas."*

11:30 JOHN H. GIBBON, JR., M.D., Samuel D. Gross Prof. of Surgery and Head of Department of Surgery, Jefferson Medical College, Philadelphia, Pa., *"Changing Concepts in the Therapy of Cancer of the Esophagus."*

NOON

2:00 EMERSON DAY, M.D., Medical Division, Strang Clinic, New York, N. Y., *"Cancer Check-up In Private Practice."*

2:30 WILLIAM B. KANNEL, M.D., Associate Director, Department of Health Education and Welfare, Framingham, Mass., *"Factors in the Development of Clinical Atherosclerotic Disease."*

3:00-3:30 P.M.—INTERMISSION

3:30 DONALD J. BIRMINGHAM, M.D., Medical Director and Chief, Dermatology Section, Research and Technical Services Branch, Department of Health, Education and Welfare, Cincinnati, Ohio, *"Occupational Diseases of the Skin."*

4:00 GERRIT W. H. SCHEPERS, M.D., Director, Institute of Industrial and Forensic Medicine, Washington, D. C., *"Man Made Diseases."*

4:30 *Question and Answer Period.*



thrown for a loss...

Keeping flies out of pharmaceutical production areas is important, yet entrances must accommodate heavy traffic of people and materials. In fact, at Eli Lilly and Company, the entrances to certain production facilities where traffic is heaviest have no screens or doors. □ This makes it look easy for flies to get in. But let one try it and he is literally picked up by a fast-moving blast of air and thrown for a loss—back outside. This "curtain of air," moving down and out from the top of the open doorway, bars the entrance and keeps flies out . . . still another step demonstrating the care that goes into the finished product.

Eli Lilly and Company • *Indianapolis 6, Indiana, U.S.A.*

Lilly

401004

Journal of the Tennessee Medical Association

OWNED AND PUBLISHED BY THE ASSOCIATION

Volume 57 SEPTEMBER, 1964 Number 9

The Many Faces Of Diabetic Keto-Acidosis*

RICHARD C. SEXTON, JR., M.D., Knoxville, Tenn.

What clinician has not been confused at times in the face of diabetic acidosis! It can offer a severe test in differential diagnosis, not only of the condition itself but of diseases of which it is a complication.

The following is a passage from Joslin's textbook on the Treatment of Diabetes Mellitus.[1]

"The symptoms of diabetic coma are notoriously vague and even to a doctor the diagnosis often proves elusive. The spectre of threatening diabetic coma should always haunt the physician, particularly when the patient is first seen. It is astonishing how insidiously coma steals over a patient, and we have given up expecting nurses, unless they have had great experience with diabetic patients, to recognize its approach. . . . Despite the only too large number of cases of diabetic coma which we have seen, more than once we have been chagrined at having failed to recognize its presence."

The many faces with which diabetic keto-acidosis can present was rather forcibly illustrated by a patient I saw on January 19, 1964, on being called to the Emergency Room of one of our hospitals by one of my surgical colleagues concerning a 62 year old white woman.

The patient gave a history of nausea, vomiting and shortness of breath beginning about 24 hours previously.

She had been hospitalized because of a left hemiparesis due to cerebral thrombosis, in Oct. 1961, from which she had largely recovered without significant neurologic sequelae. She had been hospitalized in Nov. 1963 following an episode of upper gastrointestinal bleeding, the precise origin of which was never determined. An upper gastrointestinal x-ray study during that admission disclosed a large esophageal hiatal hernia without any x-ray evidence of an ulcerative lesion from which the bleeding might have occurred.

Upon the occasion when I saw her, the patient reported rather marked shortness of breath during the preceding 24 hours and added that almost any activity seemed to intensify this breathlessness. The emphasis she placed on shortness of breath led me to suspect left ventricular failure.

Auscultation disclosed medium moist inspiratory rales at both bases, which heightened our suspicions in this respect. On continued observation, however, it became obvious that this patient was somnolent and that she fell asleep in absence of external stimuli. (Most patients with dyspnea due to left ventricular failure, in my experience, have appeared alert, and usually display some degree of anxiety, neither of which this patient exhibited.)

Because of the combination of nausea, vomiting, and shortness of breath the possibility of uremic acidosis was considered and a BUN. was requested. A blood sugar determination was also obtained as a part of our initial laboratory studies, despite knowledge that no evidence of diabetes had been detected during her hospital admission about 6 weeks previously.

Because of the patient's previous left hemiparesis and impaired cerebration, the possibility of a central nervous system lesion was also considered as a basis for her nausea and vomiting. We could not demonstrate any focal neurologic deficits but the patient obviously was mentally obtunded.

The nausea and vomiting together with some epigastric and abdominal tenderness also led us to suspect intestinal obstruction. The possibility of incarceration of the pre-existing hiatal hernia was considered. For this reason, while her laboratory studies were in progress, the patient was moved to the x-ray department where she was given Lipiodol and no obstructive lesion was found. The large hiatal hernia was again demonstrated.

The B.P. at admission to the Emergency Room was 80/60, which represented a substantial decline from her previous levels, and made us think of surgical lesions of the abdomen which might produce shock,—such as acute pancreatitis, mesenteric thrombosis, and recurrent upper gastrointestinal bleeding.

After we had gone through these agonizing diagnostic calisthenics I happened to detect the sweet fruity odor of the patient's breath and an immediate inquiry was made as to the result of the blood sugar determination. It was 308 mg.

*Read at the meeting of the Tennessee Diabetes Association April 13, 1964, at Memphis, Tenn.

per 100 ml. The urine was also found to have a 4+ glycosuria as well as a strongly positive acetone test.

With better technics of detection, better patient education, and better tools for the management of patients with diabetes mellitus, one might anticipate that all of us will be seeing diabetic keto-acidosis with less frequency. There is the distinct possibility, however, that the injudicious use of oral hypoglycemic agents, particularly in juvenile and middle-aged diabetics, together with the increased life span of diabetics and the general expansion of the aged sector of our population, could result in an absolute increase in the incidence of this complication.

Diabetic keto-acidosis may present itself with many clinical and laboratory faces. Among the entities which may simulate diabetic keto-acidosis are many of the non-acidotic complications of diabetes which will be commented upon in more detail as we go along. The following is a partial list of commonly encountered clinical entities which diabetic keto-acidosis may simulate.

1. Insulin-induced coma.
2. Organic hyperinsulinism.
3. Uremia.
4. Surgical diseases of the abdomen.
5. Inflammatory diseases of the central nervous system.
6. Vascular and neoplastic diseases of the central nervous system.
7. Hepatic coma.
8. Hypokalemic nephropathy.
9. Hypokalemic myocardiopathy.
10. Peptic ulcer disease.
11. Acute pancreatitis.
12. Vulvovaginitis.
13. Ocular refractive errors.
14. Nephropathy with polyuria.
15. Psychosomatic disorders.
16. Acute myocardial infarction.
17. Barbiturate intoxication.

The characteristic picture of *insulin-induced coma* is quite familiar to this audience. We must keep in mind, however, that not all patients present with this typical picture. An occasional patient, because of previous administration of glucose, may have a hyperglycemia and perhaps even glycosuria at a time when coma or marked impairment of cerebration is present. Glycosuria is often present in the patient with insulin coma at the time the first urine specimen is obtained. Terminally, the patient with diabetic coma may exhibit quite shallow respiration not unlike that seen in insulin shock.

Comatose patients with *organic hyperinsulinism* may present similar difficulties in differential diagnosis. Historical information can be invaluable in these patients. The development of coma is apt to be precipitous and usually occurs under fasting conditions. You are all familiar with the criterion of the Whipple triad which these patients usually satisfy.

The differential diagnosis between *uremic acidosis* and diabetic keto-acidosis on the basis of physical findings alone can be extremely difficult. In both conditions the patient may be hyperpneic, somnolent, restless, and may complain of nausea and vomiting. Dehydration may be evident in both conditions. The presence of peripheral or dependent edema is a very helpful finding. It is seldom seen in diabetic keto-acidosis except in patients who have concomitant disease processes of which fluid retention is a manifestation. Many patients with uremia, though not all, will present with evidence of fluid retention. The outward clinical appearance of the patient with uremic acidosis and the patient with diabetic keto-acidosis can be so similar that one should not hesitate to request both a blood sugar determination and some test of renal function at the outset. Determination of serum acetone will help to differentiate between uremic acidosis and diabetic keto-acidosis in the patient with Kimmestiel-Wilson nephropathy and in patients with diabetes and other forms of renal disease. Patients with uremic acidosis or coma due to chronic glomerulonephritis may show glycosuria due to a low renal threshold. Patients with concomitant diabetic acidosis and renal insufficiency may not have an acetonuria because of the impaired renal function. Here, too, the determination of serum acetone will resolve the diagnosis. Antecedent knowledge of the existence of the triopathy of retinitis, nephropathy, and neuropathy in a given patient helps resolve this diagnostic dilemma. Diabetics exhibiting exacerbations of pyelonephritis, hematuria, fever, renal colic, and a precipitous decline in renal function, should be sus-

pected of having necrotizing papillitis. Keto-acidosis may, of course, occur in these patients as a result of the renal lesion.

We are all familiar with the frequency with which patients with uremic acidosis and diabetic keto-acidosis are admitted to the *surgical* services in our large general hospitals. The nausea, vomiting, headache, and thirst which may characterize both conditions, the occasional patient with gastric dilatation and so-called gastroparesis diabeticorium together with the abdominal pain, leukocytosis, and blood in the vomitus which diabetics in acidosis often exhibit, all tend to arouse the carving instincts of our surgical colleagues. Hypopotassemia may produce not only gastric dilatation but paresis, dilatation, and gas-filled segments of the small bowel may also be present, thus simulating the x-ray appearance of mechanical intestinal obstruction. This combination of findings may necessitate the use of extreme polemic finesse to deter the more ardent of our surgical colleagues from doing a laparotomy. A few well-chosen laboratory procedures, however, will dull their ardor and orient the treatment effort in the right direction.

Listlessness, restlessness, confusion, headache, and irritability may all occur in patients with diabetic acidosis. These manifestations often arouse suspicion of inflammatory, vascular, or neoplastic *lesions of the central nervous system.*

Hepatic coma seldom creates any diagnostic problem. The presence of icterus, hepatomegaly, ascites, or flap tremor will usually lead to an accurate diagnosis.

Fischer and Nichol[2] reports the occurrence of *hypokalemic myocardiopathy* in a 17-year-old diabetic in acidosis. It is also of interest that this patient had a psychotic episode during the recovery phase from her acidosis. The following electrocardiographic changes were observed in this patient,—(1) complete AV dissociation, (2) S-T changes, (3) prominent U waves, and (4) prolonged IV conduction resembling a left bundle branch block.

The electrocardiographic changes in patients with hypokalemia may simulate the combined effects of digitalis and quinidine in patients with a normal serum potassium. Tachycardia may abolish the electrocardiographic evidences of hypokalemia. It has been observed that electrocardiographic changes are apt to be evident with serum potassium levels below 2.3 or above 6.7 mEq/L. unless concomitant electrolyte abnormalities obscure the picture. It therefore becomes desirable to take repeated tracings if one hopes to demonstrate these changes.

The electrocardiographic changes in patients with hypokalemic myocardiopathy probably reflect both physiologic and transient anatomic cardiac abnormalities. Perkins[3] described patchy myocarditis and focal endocarditis in patients with known potassium deficits. Edema and fragmentation of myocardial fibers and lymphocytic infiltration of the myocardium have also been described. As you all know, cardiac arrhythmias may also occur in patients with excessive or abnormally low serum potassium levels. Therefore it is easy to see how a patient with diabetic keto-acidosis, in whom the total body potassium has been depleted, might present with findings which are suggestive of primary cardiac disease. It is also of interest that the patient reported by Fischer and Nichol had paralysis of the respiratory tract secondary to the hypopotassemia which required mechanical assistance. This patient, incidentally, had apparently developed a chronic potassium deficiency. She had been placed on an oral hypoglycemic agent, and in retrospect it appeared that she had been out of control for many weeks prior to her hospital admission. The neurologic picture in patients with marked potassium depletion may occasionally simulate bulbar poliomyelitis or bulbar lesions from other causes.

Patients with diabetic acidosis, as above indicated, often have abdominal pain, nausea, and vomiting, and occasionally, hematemesis, as their presenting symptoms. There are occasional reports of massive hematemesis. This combination of symptoms leads one to think of the possibility of *peptic ulcer disease* in the gastroduodenal region. Many patients with diabetic keto-acidosis may be in circulatory collapse or have significant depression of the blood pressure by the time they are seen by the physician. This tends to further strengthen the suspicion of peptic ulcer with shock

due to blood loss. The presence of dyspnea might also be assumed in such a situation to relate to acute blood loss.

Tully and Lowenthal[4] reported their experiences in a series of patients with diabetic coma and *acute pancreatitis.* It was their impression that patients with this combination of illnesses exhibited certain features which enabled one to suspect the accurate diagnosis. Their patients for the most part had had a rapid fall in blood pressure. Frequently there was delirium and even hallucinations. The serum amylase was elevated. They observed a "water-resistant dehydration" which responded to blood and Dextran; the extent of dehydration was extreme in many of these patients. Prostration was pronounced and the patients, in general, were resistant to the usual therapeutic approach. When historical information was available the patient usually gave a history of abdominal pain with a pancreatic distribution. Abdominal spasm and tenderness was fairly frequently observed. It was their conclusion that acute edematous pancreatitis might well be a result of, rather than a cause of, diabetic coma or keto-acidosis in these patients. They referred to this combination as "acute pancreatitis of diabetic coma." Their experiences with 7 cases were reported.

The patient with diabetic acidosis frequently reports to the gynecologist because of symptoms arising from *vulvovaginitis.* This they do because these symptoms are the ones which they regard as most intolerable. The pruritis, as a rule, comes on rapidly and is intense from the outset. Local treatment is notoriously ineffectual in the absence of diabetic control.

An occasional patient with diabetic acidosis without coma will report to the ophthalmologist because of a rather precipitous decline in *visual acuity.* The ophthalmologists are rather adept in suspecting diabetes in these patients and often succeed, because of this, in impressing the patient with their diagnostic acuity.

Diabetic acidosis may simulate many *nephropathies* of which polyuria is a manifestation.

Diabetic acidosis in the *emotionally disturbed patient* may simulate polydipsia nervosa. An emotionally disturbed diabetic with acidosis may also resemble the hyperventilation syndrome. Hysterical patterns of behaviour, however, are more apt to occur in the hypoglycemic patient.

Acute myocardial infarction, particularly in the diabetic, may simulate diabetic keto-acidosis or diabetic coma. Acute myocardial infarction may indeed precipitate diabetic acidosis or diabetic coma. There may be circulatory collapse which, together with dyspnea in a patient known to have diabetes, would arouse the suspicion of ketosis. Also, it should be remembered that the circulatory collapse which may attend advanced diabetic keto-acidosis may precipitate myocardial or cerebral infarction in the diabetic whose vascular sufficiency may already be impaired in these regions.

Diabetic coma in which the characteristic Kussmaul respiration has given away to a quiet, preterminal, shallow type of respiration, occasionally with total respiratory paralysis due to hypopotassemia, may suggest *barbiturate intoxication.* Hyporeflexia or areflexia of the deep tendon reflexes may characterize both conditions. Blood sugar and barbiturate levels will establish the diagnosis.

Other esoteric clinical situations which one may encounter include the occurrence of diabetic acidosis in patients with malignancy of the pancreas and pancreatic artery thrombosis. Lakin and associates[5] report their experiences with coexisting diabetic keto-acidosis and hyperthyroidism. This combination has been observed in about 0.01% of patients with diabetic keto-acidosis at the Joslin Clinic. There is usually a history of the usual signs of hypermetabolism. There has also been an increased need for insulin and increased instability of diabetic control. The possibility of hyperthyroidism should, therefore, be suspected in any patient who begins to show instability and who has previously been under good control. The patients with combined hyperthyroidism and diabetic keto-acidosis have often shown a low grade fever which has been a bit more pronounced than that observed in patients with uncomplicated diabetic acidosis without infection.

In children salicylate intoxication may closely simulate diabetic keto-acidosis. These children often have polydipsia, poly-

uria, hyperpnea, nausea, vomiting, transient muscular irritability, and skin and mucosal petechiae may be observed. A serum salicylate level and a careful history will clarify the diagnosis. The blood sugar and serum acetone levels will, of course, be conclusive diagnostic aids in this situation.

It should be kept in mind that deep coma due to ketosis and acidosis seldom develops with a bicarbonate level of over 10 mEq/L. or with a venous pH of over 7.20. If the bicarbonate level is above 10 mEq/L. one should look for other causes of coma even in the patient known to have diabetes mellitus.

Summary

An attempt has been made to illustrate the manner in which diabetic keto-acidosis may simulate many other clinical entities which we commonly encounter. Mention has been made of co-existing disease processes and of nonacidotic complications of diabetes mellitus which may complicate the diagnostic picture. The state of alertness of the patient suspected of having diabetic keto-acidosis or cardiac hyperpnea is emphasized as a useful differential diagnostic observation. The manner in which the varied manifestations of diabetic acidosis may take the patient to physicians with different specialty orientations is described. The need for a carefully elicited history in these patients, as elsewhere in medicine, is evident. The usefulness of the serum acetone determination in patients with renal insufficiency or in patients with vascular shock is emphasized.

The need for a high index of suspicion for keto-acidosis in the known diabetic as well as in any patient in whom there is hyperpnea, disturbed cerebration, or signs of dehydration is obvious. Prompt detection of diabetic keto-acidosis with prompt institution of appropriate therapeutic measures will further reduce morbidity and mortality in the expanding diabetic population from this serious, potentially lethal, complication.

References

1. Joslin and Al: The Treatment of Diabetes Mellitus, Philadelphia, Lea & Febiger, 1952. P. 353.

2. Fischer, D. S. and Nichol, B. A.: Intraventricular Conduction and Respiratory Tract Paralysis in Diabetic Keto-acidosis. Am. J. Med. 35:123, 1963.

3. Perkins, J. G., Peterson, A. B. and Riley, J. A.: Renal and Cardiac Lesions in Potassium Deficiency Due to Chronic Diarrhea, Am. J. Med. 8:115, 1950.

4. Tully, G. T. and Lowenthal, J. J.: Diabetic Coma of Acute Pancreatitis, Ann. Int. Med. 48: 310, 1958.

5. Lakin, M., Bradley, R. F. and Bell, G. O.: Acute Hyperthyroidism in Severe Diabetic Keto-acidosis, Am. J. M. Sci. 241:443, 1961.

After a series of questions bringing out the limited benefits provided by King-Anderson, Senator Curtis said he did not believe in taxing young and middle-aged persons who are raising families, buying homes and educating children to pay for the hospital bills of someone who happens to be over 65 if that person is better able to pay a hospital bill than the person who is being taxed.

Anyone who is politically astute knows that once such a program is established, benefits would be added, the age level lowered, and that it would be the beginning of a national medical system, the Senator declared.

Curtis said that calling Social Security an insurance program is a "deception and a sham." It is a tax program and should be called that, he said. *(Hearings before the Senate Finance Committee on H.R. 11865.)*

Recent Advances In Immunization Of Children*

SARAH H. W. SELL, M.D.,† Nashville, Tenn.

Introduction

Ours is a wonderful age in which to practice medicine. Each year greater numbers of diseases are being placed on the preventable list and interest in them is shifting away from treatment toward prevention. This is especially true in the field of infectious diseases. It is necessary to keep apace of the dynamic advances which require constant readjustment of our schedules for immunizations. For example, the recent availability of a choice of virus vaccines for poliomyelitis and measles in the form of attenuated, live, as well as killed, virus preparations has made us conscious of the need to know exactly how to use each one.

This present report will discuss some of the recently released agents for both active and passive immunization. A schedule for active immunization of infants and children encompassing the new vaccines is offered for consideration. (Table 1.)

Table 1

SUGGESTED SCHEDULE FOR ACTIVE IMMUNIZATION OF INFANTS AND CHILDREN

Immunization may be started at any age. The immune response is limited in a proportion of young infants and the recommended booster doses are designed to insure or maintain immunity. Protection of infants against pertussis should start early. This schedule is intended as a flexible guide which may be modified within certain limits to fit individual situations.*

Age	*Preparation*
2 mos.	Oral Polio—Type I—or Trivalent* DTP
3 mos.	DTP; Oral Polio—Type III
4 mos.	DTP; Oral Polio—Type II or Trivalent
9 mos.	Measles vaccine
12 mos.	Smallpox;† Tuberculin & Histoplasmin skin tests
15 mos.	DTP; Oral Polio—Trivalent
2 yrs.	Tuberculin & Histoplasmin skin tests
4 yrs.	DTP; Tuberculin & Histoplasmin skin tests
6 yrs.	Smallpox; Typhoid (where required); Tuberculin & Histoplasmin skin tests
8 yrs.	TD
12 yrs.	TD; Smallpox
16 yrs.	TD; Smallpox

After 16 years of age, smallpox revaccination and tetanus toxoid booster doses should be repeated every 5 years.

DTP = Diphtheria-Tetanus-Pertussis combined
TD = Tetanus-Diphtheria toxoid (adult type)
* = Trivalent oral polio needs only 2 doses; suggest age 2 & 4 months. Booster at 15 months as "clean-up," for all patients.
† = May give smallpox at 5 months or 15 months, if desired.

*Adapted from the Recommended Schedule of the Report of the Committee on the Control of Infectious Diseases, 1964, Published by the American Academy of Pediatrics, Box 1034, Evanston, Illinois, $1.50 per copy.

Tetanus. This is a completely preventable disease today. The toxoid is the most nearly perfect of the immunizing agents since the side reactions after its administration are low and the duration of protection is long. The antigen stimulates antibodies against the toxin rather than the whole bacterial organism. "Disease"—not "infection"—is our problem. The presence of circulating antitoxin in the tissues at the time of infection usually prevents disease.

For many years now, tetanus combined with diphtheria toxoid and pertussis vaccine—DTP—has been given to young infants and children as primary immunization. The Armed Forces have immunized millions of young adults. However, in spite of these efforts this disease still occurs in our state. (Table 2 shows the number of cases reported in Tennessee for the past 5 years for tetanus, diphtheria, typhoid, per-

Table 2

PREVENTABLE DISEASES—REPORTED CASES IN TENNESSEE* FOR THE PAST FIVE YEARS

	1963	1962	1961	1960	1959
Diphtheria	3	4	2	9	12
Tetanus	17	13	10	23	17
Pertussis	865	776	362	1,111	3,102
Typhoid	30	30	47	56	54
Poliomyelitis	13	12	26	55	386
Measles	7,880	24,476	15,507	19,202	10,364
Smallpox	0	0	0	0	0

*From the Department of Epidemiology, Tennessee State Health Department.

*Presented at the Meeting of the Tennessee Pediatric Society, April 13, 1964, Memphis, Tenn.

†From the Department of Pediatrics, Vanderbilt University School of Medicine, Nashville, Tenn.

tussis, poliomyelitis and measles.) Of the total of 80 cases of tetanus, 17 occurred just last year. It is obvious that greater emphasis is needed for immunization of all patients.

For active immunity, the relatively recent availability of the "adult type" fluid toxoid (without alum adjuvant) has reduced the unpleasant reactions from repeated injections. Intradermal administration, especially for booster doses has been recommended.[1] This preparation is available either as a single antigen or combined with diphtheria.

For passive immunity, human gamma globulin, rich in tetanus antitoxin, has been shown recently to be superior to the old preparations of horse serum.[2] The half-life of the human antitoxin is in the range of 4 weeks while horse antitoxin was 7 to 14 days. The rapid disappearance of the heterologous antibody was thought to be due to immunologic clearance by antibodies directed against the foreign protein. After sensitization of the patient subsequent injections of the horse antiserum resulted in even shorter duration of persistence of antitoxin—in the range of 1 to 2 days.[3]

Human hyperimmune tetanus globulin would appear to be the ideal agent for passive tetanus prophylaxis but to date the exact dose to use under various circumstances has not been definitely established.[4] The current thinking, however, favors 500 or less for routine prophylaxis. It is available in vials of 500 or 1500 units.

As pointed out by Edsall,[4] the occurrence of tetanus—a preventable disease—represents a failure in private and community medical practice. Active immunization is the most reliable way to prevent tetanus.

Diphtheria. Hypersensitivity to diphtheria toxoid can be developed by repeated exposure to the live bacilli or by repeated injections of the toxoid. For this reason, primary immunization of adolescents or adults in the past has necessitated a skin test for hypersensitivity (Maloney or Zoeller) before administration of the antigen. The recent development of fluid toxoid which utilizes small amounts of antigen has smoothed out this rough situation and made it easy to immunize "older" patients as well as to maintain immunity throughout life by booster doses.[5] The combination of tetanus toxoid, in the usual amounts, with dilute diphtheria toxoid (labelled "TD-adult type") is a recent advance. We have recommended that this dilute type of toxoid be used in children in Tennessee after age 8. (Table 1.)

Typhoid. Since some counties in Tennessee require typhoid immunization before admission to school, a word about the vaccine is pertinent. In a field trial by WHO workers[6] it was demonstrated that heat-killed-phenol preserved vaccine was about 70% effective in protecting troops sent to an endemic area. The immunity was not long lasting, at best. The Tennessee State Health Department prepares such a vaccine for distribution in our state.[7]

Recall of antibody levels can be effective by intradermal injection of 0.1 ml.[8]

Pertussis. Table 2 shows that this disease is shockingly prevalent in Tennessee even though a relatively good vaccine has been available for many years. The recent standardization of potency so that 12 NIH units can be given for satisfactory immunization has improved the dependability of the products. Since newborn infants are susceptible, primary immunization should begin early.

Poliomyelitis. After the statewide community campaigns last year, using the oral monovalent vaccines of the Sabin type, our main task in this area now involves immunization of young infants as they come along, and protection of the older patients who recently moved into the community or who missed one or two doses of the monovalent vaccine.

The recent availability of trivalent vaccine has simplified the situation. For primary immunization at least two doses are needed to give protection against all three types of poliomyelitis. Type I seems to be the biggest problem. Unfortunately, this is the most frequent type found in the United States and therefore protection is most needed. A booster at age 15 months or 2 years has been recommended for young infants.[8] For patients who have had partial coverage with monovalent vaccines, a trivalent "clean-up" dose is a convenient way to administer all types in office practice. We have advised patients who need only

one type, having received two during the previous community-wide campaign, to get one trivalent dose, now. The need for boosters otherwise in the older population is not established.[9]

Botulism. The recent experience with botulism in Tennessee reminded physicians, with a horrible jolt, that this highly fatal disease may appear without notice. There is no vaccine available for active immunity but prophylaxis with specific antitoxin is imperative for passive immunity as soon as the diagnosis is recognized.

Of the various types of botulism, A and B are the most common in the United States. However the occurrence of Type E recently brought to light the fact that the latter intoxication has been associated with the ingestion only of fish or fish products, while the former types have been reported in many categories of improperly preserved foods.[10]

It is extremely important to remember that the antitoxin may save more lives by being given prophylactically to exposed individuals who have not yet shown clinical manifestations of the disease, than to be saved for heroic doses after the patients have become established clinical cases.[4]

Every physician should know, at a moment's notice, where to obtain the antitoxin. For Types A and B, contact should, as in the past, be made with the representative of the Lederle Laboratory. A limited supply of Type E, in a polyvalent preparation, has been obtained by the Communicable Disease Control Center in Atlanta, Georgia, and may be made available on an emergency basis.* The Tennessee State Health Department will gladly assist in procuring the antitoxin in an emergency.[7]

Measles. Table 2 shows that measles is a disease which offers a big challenge. The recent availability of measles virus vaccine has stimulated a great deal of interest. The whole question as to the best way to immunize children in all instances is still undergoing active exploration. Out of this fluid situation, however, some facts appear to be evident.

In the first place, the live virus vaccine will not "take" in the presence of detectable antibody which is naturally acquired, e.g., in young infants who have inherited immunity from their mothers or in children who have had wild measles, even though subclinical or mild.[11] The presently available form of Enders attenuated strain, used alone in susceptible children, reportedly causes febrile reactions in 85% of the subjects; but when given with calculated doses of gamma globulin, few unpleasant reactions occur. If the two are mixed in the same syringe, the virus is neutralized and no protection ensues; however, by giving them at different sites, the reactions to the virus vaccine are reduced and immunity results.[12] A further attenuated strain (Schwarz), under investigation, promises to give good protection and few side reactions without the use of gamma globulin. This is not licensed as yet and therefore is not available.

The latest, potent killed-virus vaccines (formalin-killed, aluminum adsorbed) have stimulated good antibody responses, but the duration of protection is thought to be limited. Children given two or three doses of killed-virus vaccine then challenged with the Enders strain of live virus had few unpleasant reactions to either vaccine and uniformly developed good antibody titres. When tested by exposure in epidemics of measles, the protection was good.[13]

The present recommendation calls for live attenuated virus vaccine (Enders) plus gamma globulin.[12] Since it will not "take" in very young infants, our schedule calls for this inpection at or after age 9 months. (Table 1.) However, there is some evidence that young infants respond to killed virus vaccine and when later challenged with Enders vaccine alone get good immunity without unpleasant reactions.[13]

If there is any question about a child's susceptibility to measles, e.g., after suspected measles, it might be best to give the vaccine for protection. If the child is susceptible he will be protected. If he already has immunity the vacine will be neutralized and cause no reaction.

In all of the reports of thousands of children immunized with either killed or live virus vaccine, no cases of measles encephalitis have been reported.[13]

*C.D.C. Center, Atlanta, (Day and night phone coverage: Area Code 404-634-2561).[10]

Rabies. After exposure to a rabid animal, active immunization to rabies has been recommended. The recently developed avian vaccine, prepared in duck embryos (Lilly), has been shown to give good antibody response and far fewer serious reactions than the Semple or brain tissue containing-vaccine. In severe exposures, particularly about the head and neck, antirabies serum is urged. The suggested dose to be given after suitable tests for sensitivity of the patient to the serum, is 1000 units per 40 pounds of body weight. In addition, active immunization should be started immediately with 14 daily doses of vaccine plus two booster doses at 10 and 20 days after the last daily dose. The local treatment of the wounds might include injection of part of the dose of antiserum into the tissues beneath the injury.

Prophylactic immunization against rabies with rabies vaccine grown on duck embryo is now recommended for persons who have a high exposure rate—e.g., veterinarians and dog catchers.[14]

Smallpox. This dread disease has been virtually stamped out of our state for many years. But modern air travel makes it possible for a patient who was exposed to smallpox in a distant land to reach almost any part of the earth during his incubation period. For this reason, the Surgeon-General of the U. S. Public Health Service has recommended that all medical personnel be revaccinated every three years. The American Medical Association recommends that all other persons be revaccinated within 5 years.[15]

The recent development of a disposable, plastic scarifier by Kravitz (manufactured as "Mono-Vac") is a new device to introduce the standard vaccine.[16]

It is well to be reminded that vaccination is accomplished by a preparation of living virus and has strong contraindications too, —of which open skin lesions, such as eczema or burns; blood dyscrasias, particularly leukemia or agammaglobulinemia; and therapy with corticosteroid hormones constitute the most important.

Hyperimmune vaccinia globulin (human) for passive immunity is now available from Regional Blood Centers of the American Red Cross upon recommendation of designated consultants.*

Suggested Schedule for Active Immunization of Infants and Children

It is recommended that the patient receive only one living virus vaccine at a time. Table 1 offers a suggested schedule which includes the new as well as the necessary old procedures in such a way that good well-baby care can be given at the same time.

DTP should be started early, especially the pertussis protection. The live poliovirus vaccine can be given at this time, too. The present recommendations for young children calls for either monovalent or trivalent, Sabin-type vaccine during the early months of life followed by a booster at age 15 months. The importance of this booster is stressed since some young infants inherit enough maternal antibody to neutralize the vaccine virus and thereby miss getting permanent protection. The "clean-up" dose should fill in the needed deficiencies which will have occurred by 15 months of age.

Measles vaccine, at 9 months of age, allows time for the decay of maternally transferred immunity. The presently available product is recommended for use with simultaneously administered standardized gamma globulin.

Smallpox vaccination, with live vaccinia virus, can be given at the time of the 12 month check-up.

At 15 months, the DTP booster is needed. The "clean-up" poliovaccine can be given conveniently at this time.

At 2 years skin tests need to be checked.

At 4 years, DTP needs to be recalled. This is a good time for skin tests too.

At 6 years, the preschool bout of immunizations takes place with smallpox vaccination and typhoid series.

Then every 4 years, tetanus and diphtheria and smallpox should be given. After the age of 8 years, the adult type, fluid tox-

*For our area: Dr. Ralph V. Platou, Professor of Pediatrics, Tulane University School of Medicine, New Orleans 12, Louisiana (Telephone 542-7611, ext. 241; Home VE 3-8301). Alternates: Dr. Margaret H. D. Smith or Dr. Norman C. Woody, both at the same office address and telephone as Dr. Platou.[8]

oid should be given.

Of course, there will be circumstances under which there must be variation of this suggested schedule. For example, a child with heat rash or eczema should not be vaccinated until the skin has cleared. A new schedule would then need to be tailored for him. As another example, one might prefer to use a measles schedule of two doses of killed-virus, then one dose of live-virus vaccine. In that case the killed-virus product could be given at the same visits as the live poliovirus.

Immunization is, indeed, a dynamic area of medical practice. Many of the things so carefully worked out in this schedule will be changed as better products are approved. The improvements will be coming along so rapidly there will be no time to develop a complacent attitude.

Never a dull moment!

References

1. Smith, M. H. D.: Active Immunization: Current Considerations, Pediatrics 32:444, 1963.

2. Rubinstein, H. M.: Studies on Human Tetanus Antitoxin, Am. J. Hyg. 76:276, 1962.

3. Smolens, J., Vogt, A. B., Crawford, M. N., Stokes, J., Jr.; The Persistence in the Human Circulation of Horse and Human Tetanus Antitoxins, J. Pediat. 59:899, 1961; Rubbo, S. D. and Suri, J. C.: Passive Immunization Against Tetanus with Human Immune Globulin, Brit. M. J. 2:79, 1962; Mahoney, L. J. and Moloney, P. J.: On the Prophylaxis of Tetanus, Canad. J. Surg. 1:127, 1958.

4. Edsall, G.: Specific Prophylaxis of Tetanus, J.A.M.A. 171:417, 1959; Passive Immunization, Pediatrics 32:599, 1963.

5. Levine, L., Ipsen, J., Jr., and McComb, J. A.: Adult Immunization. Preparation and Evaluation of Combined Fluid Tetanus and Diphtheria Toxoids for Adult Use, Am. J. Hyg. 73:20, 1961.

6. Cvjetanovic, B. B.: Field Trial of Typhoid Vaccines, Am. J. Pub. Health 47:578, 1957.

7. Tucker, Cecil B.: Personal Communication.

8. Report of the Committee on the Control of Infectious Disease. 14th Ed. 1964. American Academy of Pediatrics, Evanston, Ill.

9. Council on Drugs: Oral Poliovirus Vaccines, J.A.M.A. 187:1015, 1964.

10. Morbidity and Mortality Weekly Report. H.E.W. C.D.C., Atlanta, Georgia. Public Health Service 13:9, 6 March 1964.

11. International Conference on Measles Immunization, Am. J. Dis. Child. 103: 1962.

12. Council on Drugs: Measles Virus Vaccines, J.A.M.A. 188:157, 1964.

13. Karelitz, S., Berliner, B. C., Orange, M., Penbharkkul, S., Ramos, A., and Meunboom, P.: Inactivated Measles Virus Vaccine—Subsequent Challenge with Attenuated Live Virus Vaccine, J.A.M.A. 184:673, 1963; Fulginiti, V. A., Leland, O. S., and Kempe, C. H.: Evaluation of Measles Immunization Methods, Am. J. Dis. Child. 105:5, 1963; Fulginiti, V. A., Kempe, C. H.: Measles Exposure Among Vaccine Recipients, Am. J. Dis. Child. 106:450, 1963; Weibel, R., Halenda, R., Stokes, J., Jr., Hilleman, M. R. and Buynak, E. B.: Administration of Enders' Live Measles Virus Vaccine with Human Immune Globulin, J.A.M.A. 180:1086, 1962.

14. United Nations World Health Organization Technical Report Series, No. 201, pp. 11, 1960.

15. Goddard, J. L.: Smallpox, Diphtheria, Tetanus, Pertussis, and Poliomyelitis Immunization, J.A.M.A. 187:1009, 1964.

16. Kravitz, H.: A Simplified Technique for Vaccination Against Smallpox Using A Disposable Plastic Scarifier, Pediatrics 27:219, 1961.

Sen. Wallace Bennett (R., Utah) prepared for the record a statement showing that even without King-Anderson, in 1971 a married couple with two children on a $5,400 income will pay $388.80 in Social Security taxes and only $354 in Federal income taxes. The nation has come to a point of great decision, he said, with from now on a Social Security System that costs the individual more than it costs him to support his share of the cost of government.

This is assuming no further increases in either Social Security or the income tax, Bennett said, noting that since 1952 the increase on maximum social security benefits has been 57% and the wage base has been increased by 50 per cent. Already, the system is "bumping its head" on the mythical 10% ceiling, he said. *(Hearings before the Senate Finance Committee on H.R. 11865.)*

A-V Syndrome*

I. LEE ARNOLD, M.D., Chattanooga, Tenn.

The measurement of the extraocular muscles in upward and downward gaze as well as in the six cardinal fields has brought to our attention the so-called A-V syndromes. Urrets-Zavalia[1] and Urist[2] were responsible for stimulating our interest in these anomalies. Costenbader[3] and Parks[4] introduced the excellent descriptive terms of A-V syndromes. The A syndrome has an increasing esotropia in up gaze or an increasing exotropia in down gaze; the V syndrome has an increasing esotropia in down gaze or an increasing exotropia in up gaze. Vertical anomalies are associated with horizontal anomalies in about 40% of the cases and approximately 25% of the cases have an A-V syndrome.

To be significant in V exotropia the deviation must be 15 prism diopters greater in up gaze than in primary position, and in A exotropia must be 10 prism diopters greater in down gaze. V esotropia must be 15 prism diopters greater in down gaze than in primary position, A esotropia must be 10 prism diopters greater in up gaze.

The full refractive error must be worn during examination. The fixation target for near should be an accommodation symbol for esotropia and a fixation light for exotropia. Measurements should be made approximately 25 degrees in up and down gaze. In measuring for V exotropia one must remember that the visual axis will become gradually divergent while in intermittent exotropia the divergence is constant until dissociation occurs, then one eye swings widely outward. In V esotropia a spasm of accommodation may lead one to a false diagnosis, thus the full cycloplegic correction should be worn. Sometimes a +3.00 add is necessary in atypical cases.

The A-V syndrome should be considered in doing surgery, for a good result in the primary position may result in an over- or under-correction in some other field of gaze. A small over-correction in one field may eventually lead to an over-correction in all fields.

There are three basic groups involved in interpreting the syndromes, as regards etiology and treatment,—(1) horizontal recti school, (2) vertical recti school with a subdivision of (a) oblique, (b) vertical recti, and (3) combined school.

Urist[5] believes the anomalies of the horizontal muscles are the main cause of the A-V syndrome. The lateral recti are operated on if the deviation is greatest in up gaze, the medial recti if the deviation is greatest in down gaze. In V exotropia the lateral recti are recessed, in A esotropia they are resected. In V esotropia the medial recti are recessed, in A exotropia they are resected. Urist states that in selected cases the recession or resection procedure may correct approximately 20 prism diopters of A-V syndrome. This procedure may lead to an over- or under-correction in some field of gaze. To overcome this difficulty Knapp[6] has advocated the raising or lowering of the insertion of the horizontal recti muscles. The new insertion should be placed in the direction where decreased function is desired or placed in the opposite direction to where increased function is desired.

The amount of resection or recession depends on the amount of deviation. The vertical displacement will vary from 5 to 9 mm. averaging about 7 to 8 mm. It must be remembered that the new insertion must be equidistant from the limbus. The results are better in recession than in resection procedures. In V esotropia the medial recti would be recessed and moved down; V exotropia the lateral recti would be recessed and moved up; A esotropia the lateral recti would be resected and moved down; and in A exotropia the medial recti would be resected and moved up. In small degrees of imbalance the shifting of the insertions up or down may be all that is necessary. Knapp states that this method is not appli-

*Read at the meeting of the Tennessee Academy of Ophthalmology and Otolaryngology, April 13, 1964, Memphis, Tenn.

cable when dysfunction of the obliques is present.

Costenbader[7] warns that bilateral recession of the medial recti in young infants with A syndrome and with high degree of esotropia may result in considerable increase in the A syndrome.

In some cases there is little or no imbalance in the primary position, so horizontal surgery is not indicated.

Breinin[8] showed, in his electromyographic studies, increased firing of the lateral recti in superior gaze, the medial recti being inhibited, which indicates that the horizontal recti play a definite role.

The vertical recti school believes that the defects greater in upward gaze indicate a superior recti dysfunction. The V exotropia indicates an underaction of the superior rectus and A esotropia indicates an overaction of the superior recti. The defects greater in downward gaze indicates a dysfunction of the inferior recti. An A exotropia is due to an underacting inferior recti and a V esotropia to an overacting inferior recti. The vertical recti can be strengthened or weakened as indicated in the A-V syndrome, but these results are usually disappointing.

Miller,[9] Fink,[10] von Noorden[11] and others have transplanted the vertical recti nasally or temporally to increase or decrease their abducting or adducting power. In A esotropia the superior recti are transplanted 7 mm. temporally, in V exotropia they are transplanted 7 mm. nasally. The inferior recti are transplanted 7 mm. temporally in V esotropia and in A exotropia they are transplanted 7 mm. nasally. Miller states that in his series of A-V defects the average correction was 28 prism diopters. The best results were with the A esotropia and worse with A exotropia. This procedure is applicable when there is very little deviation in the primary position and there are no vertical anomalies. The amount of surgery done was based on the least measurement in every field to avoid overcorrection. von Noorden believes that in V esotropia little is gained by weakening the inferior oblique when overaction is only slight. In his series of cases he reports a significant improvement with temporal transplantation of the inferior rectus muscle.

In V esotropia those of vertical muscle school who have interest in the obliques believe that the defects greater in the upward gaze are due to the inferior oblique dysfunction. The V exotropia indicates an overaction and the A esotropia indicates an underaction of the inferior oblique. Bilateral weakening procedures on the inferior obliques can be expected to correct a maximum of 20 prism diopters of V exotropia. Recession of the lateral recti is usually necessary at the same time if the V exotropia is of a high degree. In A esotropia a resection and advancement of the inferior oblique can be done. This will probably correct about 15 prism diopters. This can be combined with a resection of the lateral recti if the esotropia is greater than 15 prism diopters in primary position.

The defects greater in the down gaze are due to superior oblique dysfunction. The A exotropia indicates an overaction and the V esotropia indicates an underaction of the superior oblique. In A exotropia if there is 30 or more prism diopters, then a bilateral intrasheath tenotomy can be done. In smaller amounts it might be safer to resect the medial recti and move the insertion up.

In V esotropia if there is marked underaction of the superior oblique, then a bilateral tuck of the superior oblique can be done. The results from bilateral tucks of superior oblique are not as satisfactory as weakening procedures on superior oblique in the A-V syndromes.

Jampolsky[12] states that in exodeviation of high degree, there is tendency to develop contractures of one or both of the obliques. The "combined" school accepts that this is a synergic dysfunction with a variable combination of horizontal and vertical muscle defects. For example, in V exotropia of a large amount with a bilateral overaction of the inferior obliques, then a recession of the lateral recti can be combined with recession of the inferior obliques. Dunlap[13] has estimated that over 50 operations are available on a theoretical basis for the A-V defects.

Many ophthalmologists prefer not to combine the horizontal and vertical surgery to better evaluate the effect on the A-V syndrome. Operations must always be bilateral and symmetrical. Conservative surgery

must be done if there is an eso above and exo below or vice versa.

Table 1

CASE—C. H. AGE 3
Resect each lateral rectus 5 mm.
Transplant each superior rectus 7 mm. temporally.

	Preoperative	*Postoperative (2 yrs.)*
Distance	35 E	6 E
Near	40 E	8 E
Up	50 E	8 E
Down	30 E	6 X
Near point	2"	1½"
Stereopsis		+ to fly

Discussion (No. 1)

RALPH S. HAMILTON, M.D.: The A and V syndromes must be considered if one is to obtain good cosmetic effects and whatever functional results are possible. Certainly eyes which are straight and fusing in the primary position cannot maintain binocularity in downward gaze if they turn in or out in downward gaze.

It is helpful, in evaluating these syndromes, to recall that the lateral rectus muscles are important in holding the eyes out in upward gaze, that the medial rectus muscles are important in holding the eye in downward gaze, that the vertical rectus muscles are adductors, and that the obliques are abductors.

One of the advances brought to our attention by examining patients in the straight upward gaze and the straight downward gaze is to determine which vertical muscles are paretic in the impure A and V syndrome—i.e. when overaction and underaction of the vertical muscles are associated with the A and V syndromes.

Dr. Arnold has certainly given us a complete review of most all of the schools of thought on the subject of the A-V syndromes. One must decide for himself which school should be followed. I believe that all of the schools have some merits and that one should apply them to each individual case. I enjoyed reviewing Dr. Arnold's excellent paper and appreciate the opportunity of opening the discussion of this interesting and important subject.

Discussion (No. 2)

ROLAND H. MYERS, M.D. (Memphis): With the introduction of the A-V Syndrome, a new field in the care of certain types of strabismus was opened to the ophthalmic surgeon. Previously the surgeon was at a loss as to the best procedure for the correction of cases falling into the A-V Syndrome classification.

Dr. Arnold has given you the three different schools of thought on the types of operations to be performed. Each school has its merits. It has been my experience that weakening procedures on the inferior obliques usually give satisfactory results, while strengthening procedures, even when a combined resection and advancement of the inferior oblique is done, the results are often disappointing. Also, the results of tucking procedures of the superior oblique have not been encouraging for me.

Dr. Arnold's excellent results in the 2 cases reported, using the transplantation of the inferior and superior rectus muscles in association with horizontal muscle surgery, certainly encourages the use of this type of operation in correction of strabismus in A-V Syndrome class.

I believe this procedure will give more consistantly good results and is easier to perform than operating on the oblique muscles. Also I think balanced extraocular muscle surgery between the two eyes is very important to prevent over corrections.

I want to thank Dr. Arnold for giving to us such an excellent and concise resume of the types of operations for the correction of A-V Syndromes, and congratulate him on the fine results he obtained in the 2 cases he has reported.

References

1. Urrets-Zavalia, A.: Significance of Congenital Cyclo-vertical Motor Defects of the Eyes, Brit. J. Ophth. 39:11, 1955.

2. Urist, M. J.: Horizontal Squint With Secondary Vertical Deviations, AMA Arch. Ophth. 46:245, 1951.

3. Costenbader, F. D.: Clinical Course and Management of Esotropia. In Allen, J. H. (Ed.): Strabismus Ophthalmic Symposium, St. Louis, Mosby, 1958, v. 2, p. 348.

4. Parks, N. M.: Strabismus, AMA Arch. Ophth. 58:152, 1957.

5. Urist, M. J.: The Etiology of the So-called A and V Syndromes, Am. J. Ophth. 46:835, 1958.

Table 2

CASE—M.W. AGE 3
Resect each medial rectus 4 mm.
Transplant each superior rectus 7 mm. nasally.

		Postoperative			
	Preoperative	*1 Mo.*	*3 Mos.*	*6 Mos.*	*1 Yr.*
Distance—20 feet	25-30 X	2 E	Ortho.	Ortho.	Ortho.
Near	18-20 X	6 E	1-2 E	1-2 E	1-2 E
Up	45-50 X	10 X	4 X	Ortho.	6 X
Down	0-10 X	8 E	15 E	8 E	4 E
Near point	Remote	1½"-2"	2/3"	1½"-2½"	1½"-2½"
Stereopsis	Positive to fly	X to fly	+	+ 50%	+
+3.00 add	45-50 X			wirt	

6. Knapp, Philip: Vertically Incomitant Horizontal Strabismus, Tr. Am. Ophth. Soc. 57:666, 1959.

7. Costenbader, F. D.: Strabismus Symposium, St. Louis, Mosby, 1962.

8. Breinin, Goodwin M.: New Aspects of Ophthalmoneurologic Diagnosis. (Reprinted from the AMA Arch. Ophth. 58:375, 1957.

9. Miller, J. E.: Vertical Recti Transplantation in the A and V Syndromes, AMA Arch. Ophth. 64:175, 1960.

10. Fink, W. H.: Surgery of the Vertical Muscles of The Eye. 1962.

11. von Noorden, G. K.: Transplantation of Inferior Recti, Am. J. Ophth. 56:919, 1963.

12. Jampolsky, Arthur: Bilateral Anomalies of the Oblique Muscles. (Reprinted from the Tr. Am. Acad. Ophth., 1957.)

13. Dunlap, E. A.: Present Status of the A and V Syndromes, Am. J. Ophth. 52:396, 1961.

SHOCK IN ACUTE MYOCARDIAL INFARCTION. Nielsen, Bent Lyager and Marner, Inger-Louise. Acta med. Scandinav. 175:65, 1964.

A brief review of the pathophysiology in cardiogenic shock is given with special emphasis on the sudden fall in stroke volume attributed to a deficient power of contraction of the infarcted myocardium.

Clinical data on 354 patients with acute myocardial infarction are elaborated with emphasis on the occurrence of shock. The presence of shock in these patients is defined as a systolic blood pressure of 90 mm. Hg. or below. Thirty-four patients were in shock and 320 were not. The sex distribution of shock was equal but the over-all ratio was 2.3 males to 1 female. Shock generally developed within 24 hours.

Two thirds of the 354 patients had presented with cardiac symptoms prior to infarction, 50% with angina, about 40% with heart failure, and 8.3% with a history of a previous infarct. Infarction affected the anterior wall in 52.4%, the posterior wall in 42.5%, and 5.1% both walls were involved. Although in patients with shock the posterior wall was affected more often and these patients had a higher mortality, mortality in the others was unaffected by the site of the infarct.

Atrial fibrillation was not seen in patients with shock and was recorded in only 5.9% of the others. Supraventricular and ventricular tachycardia were seen in 5.8% of shock patients as against 0.6% of the others. Heart failure was recorded in 20 to 30% of all patients. Pulmonary edema was seven to eight times more common and atrioventricular block twice as common in the shock patients. Rupture of the heart occurred in 2.9% of patients who had shock and in 3.1% of the others: cardiac hypertrophy was seen in 88.4% of shock patients as against 67.8% in the nonshock group. (Abstracted for the Middle Tennessee Heart Association by Dee Baker, M.D., Nashville.)

Clinical Evaluation Of The Dyspneic Patient*

RICHARD A. OBENOUR, M.D., Knoxville, Tenn.

Dyspnea is a symptom,—a sensation of unusual breathlessness or an awareness of respiratory difficulty. It may be unusual to the patient because of the situation, such as dyspnea at rest; or the sensation of dyspnea itself may be unusual to the patient. In describing any sensation there is difficulty in communication, because symptoms cannot be described in absolute terms. One must therefore refer to situations commonly experienced by most persons. A normal person may have dyspnea when there is an increased volume of ventilation, as during strenuous exercise or when there is some mechanical interference with ventilation. When there is some mechanical interference with breathing, the need for ventilation remains constant but the effort necessary to produce it increases. Campbell and Howell[1] suggest that abnormal alterations in the tension on inspiratory muscles and their changes in length necessary for ventilation may give rise to the sensation of dyspnea. Regardless of the exact mechanism of dyspnea, we must remember it is a sensation and therefore subject to modification by the central nervous system. Indeed, the degree of discomfort experienced may reflect the mood of the patient as well as mechanical factors.

History. The first step in evaluating the dyspneic patient is the history. Realizing the patient may have difficulty in describing his sensations, the physician may need to point out parallel situations such as "panting, smothering, or the sensation following strenuous exercise." Occasionally the patient will recognize that the difficulty is either inspiratory or expiratory if this question is asked, and this may be helpful in diagnosis. Characteristically the patient with hyperventilation will note that he "cannot get a deep enough breath" or that his breath "does not do him any good." In obtaining the history one should remember that the chief causes of dyspnea are disturbances of the lungs, heart, or central nervous system. These areas should be particularly well explored during the interview. One should also note the pattern of dyspnea. For example, paroxysms which occur at night and are accompanied by wheezing or production of frothy sputum are generally due to left heart failure. Paroxysms of dyspnea with a seasonal pattern accompanied by wheezing generally indicate allergic bronchial asthma. The presence of associated symptoms such as chest pain or wheezing may be of great diagnostic significance. In regard to the central nervous system, one should note the patient's emotional status, since hyperventilation will commonly be related to a tense or anxious appearance. Indeed, the patient may sigh or hyperventilate to an obvious degree during the interview and physical examination. The occurrence of dyspnea when supine strongly suggests a cardiac origin, particularly if the symptom is relieved by sitting or standing. Finally, exercise tolerance should be estimated by asking questions such as how far the patient can walk on a level, how many stairs he can climb, or how far he can walk on an incline.

Physical Examination. Following the history an examination should be done with particular attention being given to the nervous, cardiovascular and pulmonary systems. In examination of the chest one should note by inspection the movement of the chest wall, the use of accessory muscles of respiration, and any deformity of the spinal or thoracic cage. Percussion should be done carefully, noting areas of dullness or hyperresonance. Upon auscultation one should listen for rales, friction rubs, and note the character of the breath sounds. The heart should be examined for precordial activity and the presence of thrills, murmurs or enlargement. The neurologic status of the patient should be determined and associated neurologic disease which might involve either the respiratory center or respiratory musculature should be noted.

*Read in part at the meeting of the Tennessee Thoracic Society, April 13, 1964, Memphis, Tenn.

Laboratory Studies. After the history and physical examination certain laboratory procedures may be indicated. These include x-ray, electrocardiography, pulmonary function studies, and routine laboratory examinations. The chest film is of great importance for not only may it reveal the cause of dyspnea, but it will enable an assessment of heart size, position of the diaphragms, and soft tissue or bony abnormalities. An EKG. may indicate the origin of the patient's dyspnea, and should be a routine part of the evaluation. If at this point, in evaluating the patient, the physician is still not certain as to the presence or absence of heart failure, measurements of venous pressure and circulation time are indicated. These procedures are easily performed with a minimum of expense.

Routine laboratory procedures may reveal anemia or abnormalities of the white blood count which could have a direct bearing on the cause of the patient's dyspnea. Leucocytosis may indicate infection which could cause or aggravate disease of the brain, heart, or lung. Anemia might aggravate heart failure and cause an exacerbation of previously stable cardiopulmonary disease. Occasionally, urinalysis will reveal evidence of diabetes which then directs the physician's thinking to metabolic acidosis as a cause of rapid respiration, rather than primary heart or lung disease.

Finally, pulmonary function studies should be done. Not only are they important diagnostically but are also valuable in evaluating therapy or following the progress of disease, and may be quite helpful at times in objectively evaluating disability. The tests used depend on the clinical situation and must be tailored to the needs of each patient. In general, however, routine ventilatory function tests, which are safe and not unpleasant, should be a part of the dyspneic patient's evaluation. Routine studies should at least include measurement of vital capacity, timed vital capacities, and maximum breathing capacity. The *vital capacity* is that amount of air which can be blown out after a maximum inspiration. The downward slope of the curve is divided into one second time intervals which are called forced expiratory volumes or *timed vital capacities.* Generally the one, two or three second forced expiratory volumes are measured. The *maximum breathing capacity* measures the ability of the patient to pump air in and out. During this test he is asked to move air as fast as possible for a given period of time, and this is recorded in liters per minute.

Since the ultimate function of the lung is to maintain blood levels of oxygen and to eliminate excessive carbon dioxide, blood levels of these substances can be measured directly as a reflection of the over-all pulmonary status. By these measurements one can determine the presence of pulmonary failure. At times the mechanism of impaired pulmonary function can be determined from blood gas studies. The specific tests may measure partial pressure of oxygen (pO_2), partial pressure of carbon dioxide (pCO_2), CO_2 content, pH, or oxygen saturation. Once again, blood gas studies add important objective data to the physician's armamentarium. They can at times differentiate clearly between pulmonary disease and some other abnormality which might be obscured by a multiplicity of symptoms or laboratory findings.

To summarize then, in evaluating the dyspneic patient the physician must consider the patient's ability to communicate, his mental status, the history, physical examination, and selected accessory clinical studies. These accessory studies should include x-ray, electrocardiography, blood and urine examinations, and pulmonary function studies. By following this sequence an accurate, precise evaluation of the dyspneic patient may be obtained.

Reference

1. Campbell, E. J. M. and Howell, J. B. L.: Sensation of Breathlessness, Brit. Med. Bull. 19: 36, 1963.

Current Programs of Orthopedics Overseas*

PAUL SPRAY, M.D., Oak Ridge, Tenn.

In the four years since the Orthopedics Overseas Division of MEDICO was started in 1959, over 100 American orthopedic surgeons have contributed their services in under-developed countries in the Far East, the Middle East, Africa, or South America. Each man has contributed his travel and maintenance expenses, and often those of his wife, also, in addition to his services. Thirteen men, or more than 10% have gone more than once, indicating the enthusiasm for the program among those who have once participated. Doctors Merritt B. Shobe, Robert Strang, and Joseph K. Maloy, the three partners of a group of orthopedic surgeons in Kingsport, have each gone to Nigeria for a period of a month or more this year. Dr. Shobe served in January, Dr. Strang in March and April, and Dr. Maloy in April and May.

Orthopedics Overseas is a branch of MEDICO. The organization started by Dr. Tom Dooley and Peter Comanduras in 1958. Since 1962 MEDICO has in turn been a service of CARE.

Beginning with a project in the Arab country of Jordan, Orthopedics Overseas now has projects also in Nigeria, in Saigon, South Viet Nam, in Colombia, and is planning a project for Tunisia.

Following the lead of the orthopedists, the gynecologists have in the past year started their own organization, Global Gynecologists, and has been sending men to Saigon. General Surgeons have also been following the pattern of short term work at their own expense in a MEDICO hospital in Malaysia, and there is also a group of Volunteer Pediatricians.

Other activities of MEDICO include short term emergency teams to Algeria, the International Eye Bank, and small longer term hospital units in Afganistan, Cambodia, Viet Nam, and Malaysia. An East Tennessee team of 10 physicians and surgeons served in Algeria during March of 1963, and Dr. Homer Isbell, Anesthesiologist of Maryville served the following month.

From the beginning, Orthopedics Overseas has been conceived as an on-the-job training program for the local physicians. In each country we are there at the request of the doctors, and assist them to better take care of the orthopedic patients they have to treat. In Nigeria, Saigon, and Jordan there are very few doctors with orthopedic training, and thus the orthopedic problems have been of necessity treated by men with no special training. There are no facilities for training in orthopedics in these countries, and with a great shortage of medical men in general, the countries can ill afford to send what men they have out of the country for special training. The few men from these countries who are receiving orthopedic training abroad will not be able to return home for some time, and even when they do they will be too few to handle all the orthopedic cases for years to come.

Each Orthopedic Overseas project is scheduled to be "phased out" as soon as a minimum of training has been provided local surgeons. The Jordan project was orginally scheduled to be "phased out" at the end of December, 1963. This date had been decided upon because an orthopedic surgeon from Jerusalem, Dr. Sami Sfeir, who has been receiving orthopedic training in this country was scheduled to return home at that time. Due to a delay in completing his requirements for the American Board of Orthopedic Surgery, he will not be able to return for at least another six months and therefore the project has been extended.

In Colombia, there are quite a few orthopedic surgeons trained within the country, but they are eager to have guest lecturers. Men from this country, especially those who have contributed extensively to the orthopedic literature or who are in teaching

*Read at the meeting of the Tennessee State Orthopaedic Society, April 12, 1964, Memphis, Tenn.

positions, have been giving lectures in the smaller teaching centers as well as in the cities.

Since the beginnings of the Orthopedics Overseas project in Jordan, there has been an increased interest in the field of orthopedic surgery, manifested by official recognition of the specialty, the erection of a new children's hospital and a rehabilitation center. Dr. Theodore Norley of West Palm Beach, Florida, who is in charge of the Jordan project, has recently pushed through a program of polio vaccination for the whole country. Before this project health officials had stated that polio was not a significant problem in Jordan, but the records of the patients seen by American orthopedists showed that polio was a very common crippler in that country. With these records it was possible to arouse enough interest in official circles to make the polio program possible.

In Enugu, Nigeria, the Eastern Nigeria government has built a special orthopedic wing into its hospital because of our project. In nearby Oji River, a former Leprosy Hospital is being helped in becoming more of a general orthopedic and rehabilitation center. This hospital is under the direction of Dr. Felton Ross, an English surgeon in the employ of the Nigerian government. Dr. Ross is pioneering in the making of soft-socket prostheses, the only prostheses being made for amputations of the lower extremity in an area of 10 million people. His tendon transplants in the hands and feet of leprosy patients are extremely skillful and the pleasure of working with him is one of the bonuses received from working in the Nigeria Project.

Many of the patients in Saigon are victims of the war with the communists, and thus much of the work is concerned with compound fractures. In addition, there are many forms with residuals of polio and tuberculosis, as was observed in Jordan and Nigeria.

Benefits to be derived by the American volunteer orthopedic surgeon from participation in Orthopedics Overseas include:

(1) Exposure to a wide variety of severe orthopedic conditions (especially tuberculosis, residuals of polio, and late untreated congenital deformities.)
(2) Acquaintanceship with orthopedic problems rarely seen in our country, such as leprosy, ainhum, madura foot, and conditions due to parasites.
(3) An opportunity to have intimate contacts with people from an alien country.
(4) The opportunity to treat some extremely grateful patients.
(5) The satisfaction of doing something constructive in a world filled with destructive forces.

Orthopedic surgeons, and indeed any interested physicians or surgeons, are urged to join those of us who have already found that service with MEDICO is a memorable and rewarding experience. At a dinner honoring the Orthopedics Overseas project in Nigeria, the Minister of Health for the region said, "Activities like yours win for your country more friends and respect than her hydrogen bombs or ventures in the Planet Neptune." As a resident of Oak Ridge, I would hesitate to think that anything is more important than atomic energy, but I do feel that our country needs friends abroad, and as physicians we have a unique opportunity to win these friends through MEDICO projects.

The authors have attained palliation in instances of advanced carcinoma of the head and neck.

Technic and Treatment Of Tumors Of The Head and Neck By Temporal Artery Infusion*

DAVIS R. WATSON, M.D. and THOMAS A. MAGUDA, M.D.,** Memphis, Tenn.

Recently there has been increased interest in the field of chemotherapy for cancer. When such drugs are given either intravenously or orally, the tumor receives no greater dose of the drug than do the normal tissues; however, Sullivan has been using a method of delivering a cancerocidal dose of drug directly to the tumor.[1]

There are four general types of drugs used in the chemotherapy of cancer: (1) alkylating agents, (2) antimetabolites, (3) antibiotics and (4) hormones. The drug used in the cases presented was the antimetabolite, methotrexate, (amethopterin), first used by Sullivan[1] in 1959. Methotrexate is a folic acid antagonist and has been shown by biochemical studies to act specifically on the nucleoproteins of the cell to prevent anabolism, which results in destruction of the cell. It acts directly to prevent the conversion of folic acid to the all important folinic acid or citrovorum factor. This drug is also a hematopoietic depressant, and so it is important that the white blood cell count and thrombocytes be followed closely during its administration and even several days after discontinuance. In contrast to the rapid antitumor effects and deactivation of the alkylating agents, the antimetabolites, such as methotrexate, require a more prolonged period of action before clinical antitumor effects are produced.[2-7]

Drug, Administration and Indications

Methotrexate was given intra-arterially, 2 mg. per hour or 50 mg. every 24 hours for 5 days. Citrovorum factor (Leucovorin, C.F.) was administered 2.5 mg. intramuscularly every 6 hours during the infusion and 2 to 5 days after infusion. Some investigators have used one-tenth the dose of methotrexate and no citrovorum factor without a resultant cell depression.

Treatment was limited to patients who had recurrent or metastatic tumors of the head and neck and had previously been operated upon, irradiated, or had a combination of both. The lesions were measured before, during, and after infusion to determine accurately any gross change. Therapy was aimed at relieving pain and producing palliation in cancers of the head and neck that were supplied by branches of the external carotid artery. In some instances a patient with an inoperable primary form of cancer of the head and neck, but with unilateral or bilateral resectable nodes, may be a candidate for combination surgery and arterial infusion chemotherapy.[8]

Method

Under local anesthesia a vertical incision was made over the superficial temporal artery and a 2 to 3-mm. vertical slit was made in the wall of the artery after injecting 0.5 ml. of a 1% procaine solution into the lumen for relaxation. Initially, No. 60 polyethylene and No. 20 teflon catheters were used, but it was later found that silastic tubing with a diameter of 0.025-inch inside was more flexible and could be inserted easier. An 18 inch length of silastic tubing was then inserted into the artery for approximately 10 Cm., and the tubing marked at that point. Two to three cubic centimeters of 5% fluorescein were then injected into the artery, and the skin was observed for a yellowish change. The skin and tumor were then observed for fluorescence with the ultraviolet light. In some instances an arteriogram was performed to further con-

**From the Otolaryngological Section, Surgical Service, Veterans Administration Hospital, Memphis, Tenn.

*Read at the meeting of the Tennessee Academy of Ophthalmology and Otolaryngology, April 13, 1964, Memphis, Tenn.

firm the correct position. If no dye was present in the internal carotid artery, the catheter was affixed to the skin, the wound closed, and a stopcock affixed to the catheter. One-half (0.5) ml. or 5 units of heparin was injected into the catheter to prevent clotting, and the patient returned to the ward for immediate infusion. The drug was placed in 50 ml. of normal saline in a compression syringe and infusion begun with the Harvard pump. Tubing was inspected often for kinking and leakage around the couplings. While under treatment the patient was observed for leukopenia or ulceration of the mucous membranes; treatment was discontinued if necessary. After completion of the infusion the catheters were removed and finger pressure applied to the artery with no resultant hemorrhage.

Case Reports

Case 1. A 44 year old white man received a full course of irradiation for a transitional cell carcinoma of the nasopharynx with metastasis to left cervical node with little or no improvement. The mass in the neck was 10 by 12 Cm. in size and the patient was having severe pain. He received a course of infusion therapy, and on the 8th day the metastatic tumor mass began to slough. There was no change in the primary tumor. He was relieved of pain for several weeks, but the tumor mass recurred and he died 4½ months later.

Case 2. This 74 year old white man had a squamous cell carcinoma of the left soft palate and base of the tongue with metastasis to a left cervical node. He received a course of irradiation with temporary relief, but was readmitted with massive hemorrhage from the tumor, pain and inability to swallow. Prior to therapy the primary tumor on the palate measured 2.5 by 3.0 Cm. Following a full course of infusion the tumor had completely disappeared after 2 weeks, the pain was relieved and the patient was able to open his mouth widely and swallow food. Relief from pain lasted 2 months, but the tumor recurred and the patient died 3 months after treatment.

Case 3. A 61 year old white man had had irradiation for squamous cell carcinoma of the epiglottis with bilateral metastases to the cervical nodes. He had only slight improvement and returned because of severe pain in the right sided large metastatic fixed mass. He was given a course of methotrexate and only achieved a 30% reduction in the size of the mass, but did receive complete relief of the pain in the right cervical area. Relief of pain lasted several weeks, but the mass in the neck again enlarged. He developed pulmonary metastases and died 4 months later.

Case 4. A 43 year old white man had a total laryngectomy, radical neck dissection on the right side and irradiation for squamous cell carcinoma of the epiglottis. Several months later he developed local recurrence with metastases to the left cervical nodes and severe pain in the metastatic mass. The patient was given a full course of drug treatment, and on the 7th day had relief of pain, but only slight reduction in the size of the mass. Palliation lasted several weeks but pain recurred and patient went on to death 3 months later.

Case 5. A 54 year old white man had a 14 year history of multiple excisions including maxillectomy, orbitectomy, and irradiation therapy for adenocystic carcinoma of the palate. On the last admission he presented with a recurrence in the right inferior meatus, which on examination had a bluish granular appearance. Therapy was begun but on the second day he had severe pain, and arteriogram showed extravasation into the arterial wall. The catheter was replaced but pain recurred, and treatment was abandoned with only slight reduction in pain and size of the tumor.

Results and Complications

Relief of pain was obtained in all patients to varying degrees and for varying lengths of time. The size of the tumor or metastases was reduced or completely disappeared in all patients. Two patients again became able to swallow food after therapy.

One patient developed a right hemiplegia 14 days after beginning therapy. The catheter had been left in place for future infusion, but arteriogram was performed and revealed that the tip was in the common carotid artery. Even though it was not proven that a thrombus had formed around the catheter tip it was removed. The patient's hemiplegia later improved. One patient developed severe pain over the artery and arteriogram showed erosion of the arterial wall with extravasation into the arterial layers. One patient developed pneumonia and diarrhea which improved with treatment. In this same patient leukopenia occurred rapidly but returned to normal in several days.

Conclusion

Even though these cases represent a small sampling, it is thought that chemotherapy by arterial infusion may offer acceptable palliative treatment to relieve pain and restore some function, and at the same time

retard the progress of the tumor. Complications in the future will probably be reduced with improvement in technic.

References

1. Sullivan, R. D., Miller, E. and Sikes, M. P.: Antimetabolite-Metabolite Combination Cancer Chemotherapy, Cancer 12:1262, 1959.

2. Farber, S., Diamond, L. K., Mercer, R. D., Sylvester, R. F., Jr., and Wolff, J. A.: Temporary Remissions in Acute Leukemia in Children Produced by Folic Acid Antagonist, 4-aminopteroylglutamic Acid (aminopterin), New England J. Med. 238:787, 1948.

3. Karnofsky, D. A.: Nitrogen Mustards in Treatment of Neoplastic Disease, Advances Int. Med. 4:1, 1950.

4. Karnofsky, D. A.: Summary of Results Obtained with Nitrogen Mustard in Treatment of Neoplastic Disease, Ann. New York Acad. Sc. 68: 899, 1957-58.

5. Magill, G. B., Myers, W. P., Reilly, H. C., Putnam, R. C., Magill, J. W., Sykes, M. P., Escher, G. C., Karnofsky, D. A., and Burchenal, J. H.: Pharmacological and Initial Therapeutic Observations on 6-diazo-5-oxo-1-norleucine (DON) in Human Neoplastic Disease, Cancer 10:1138, 1957.

6. Miner, R. W., Editor: 6-Mercaptopurine, Ann. New York Acad. Sc. 60:183, 1954-55.

7. Rhoads, C. P., Editor: Antimetabolites and Cancer. Washington, D. C., American Association for the Advancement of Science, 1955.

8. Sullivan, R. D. and Daly, J. F.: The Treatment of Head and Neck Cancer with the Continuous Arterial Infusion of Methotrexate and the Intermittent Intramuscular Administration of Citrovorum Factor, Tr. Am. Laryng. A. 82:54, 1961.

STAFF CONFERENCE

City of Memphis Hospitals*

Percutaneous Translepatic Cholangiogram

DR. HARWELL WILSON: Gentlemen, our first case for consideration this afternoon is an interesting problem related to biliary tract disease. Dr. Jackson, would you give us the findings on this patient?

DR. THOMAS JACKSON: This 70 year old white woman was admitted to the medical service on April 13, 1964, with the chief complaint of nausea and vomiting of 6 days duratiton. For the 2 week preceding admission, she had complained of gas pains, indigestion and heart burn. The pain was described as occurring 10 minutes after meals and lasting approximately 4 to 6 hours. It was located in the epigastrium and in the right upper quadrant, and radiated about the right costal margin to the tip of the right scapula. During this illness she also had shaking chills and fever. She had noticed light stools for 2 days and slowly progressing jaundice without pruitus. Her past medical history was important. She had a cholecytsectomy in 1951 for cholecystitis with stones. She was well until 1960, when she developed jaundice, chills and fever, and at exploration of the common duct, numerous stones were removed.

Examination revealed a slim jaundiced white woman. T. was 102.5°; P. 88; other vital signs were normal. There was epigastric and right upper quadrant tenderness, a questionably enlarged liver, 3 finger-breadths below the right costal margin, and light brown stool on rectal examination.

Laboratory data on admission revealed a PCV. of 40% with icteric serum. The WBC. count was 20,350. The total serum bilirubin was 5.3 mg. with 3.4 mg. % direct. Serum alkaline phosphatase was 37 King-Armstrong units. The urine was positive for bile and negative for urobilinogen. The SGOT was 36 and serum proteins were 3.8 Gm. of albumin and 3 Gm. globulin per 100 ml.

DR. WILSON: Thank you, Dr. Jackson. Dr. Storer, this patient is on your service. Would you give us your impression as to the problem when you first saw the patient?

DR. EDWARD STORER: During the first few days of her hospitalization she was acutely ill, having a septic temperature, jaundice, right upper quadrant pain, and persistent nausea and vomiting. She was treated with nasogastric suction, electrolyte replacement and antibiotics. It was our impression then that the most likely diagnosis was recurrent common duct stones, since she had the classical Charcot's triad.

DR. WILSON: Well, this certainly seems a reasonable impression, and I think that clinical judgment in cases of this type is actually more important than laboratory findings. However, all of us feel that we need careful laboratory studies as well as clinical judgment. Dr. Britt, in your opinion, is there any laboratory procedure which will definitely tell us whether or not this patient had extrahepatic obstructive jaundice or an intrahepatic jaundice, and if it is extrahepatic, is there any test that will definitely tell us whether we are dealing with recurrent common duct stones or a neoplasm in the head of the pancreas?

DR. LOUIS BRITT: Dr. Wilson, I agree there is no routine test that will definitely differentiate the types of obstructive jaundice, whether intra- or extra-hepatic. The "liver profile" as previously outlined is certainly adequate in the usual case of jaundice. This particular "liver profile" indicates more than likely that she has obstructive jaundice, but we cannot say whether or not it is extrahepatic. I think a point to be made is that often cholangiograms and other studies are done in an intensely jaundiced patient, and which are of no benefit in either a positive or a negative fashion. In general the B. S. P. and the various contrast media studies are quite popular, but they very rarely give any help with a patient with this degree of jaundice.

DR. WILSON: At what actual level of jaundice do you think such tests may be helpful?

DR. BRITT: Generally speaking, the B. S. P. determination is interfered with in patients with any significant elevation of the bilirubin. The cholangiographic studies are considered by most to be useless when the serum bilirubin is 3 milligrams % or higher.

DR. WILSON: I think most of us would agree with your statement. My personal feeling regarding the large number of laboratory tests available to study a patient of this type agree with those expressed by Zollinger, in a discussion we had of this

*From Department of Surgery, University of Tennessee School of Medicine, Memphis, Tennessee.

problem not long ago. He emphasized that most experienced surgeons tend to pick out a few tests with which they are familiar and then base the diagnosis on the information obtained by these particular tests. Frankly, I like to have a serum bilirubin level primarily to measure the depth of jaundice. I have never found the direct or indirect part of the report to be very helpful. I do believe that the alkaline phosphatase, the cephalin flocculation test, and the thymol turbidity test, or one of the enzyme tests may be helpful, but as has been mentioned earlier, none of these gives us the answer to the problem. Dr. Jackson, suppose you tell us about the further studies which were carried out on this patient.

DR. JACKSON: Repeat lab. data 4 days after admission revealed a hematocrit of 35.5, a white count of 20,750, and a bilirubin of 12.4 and serum alkaline phosphatase of 55.8 King-Armstrong units. By the 7th hospital day, her hematocrit was 32, the white count was 10,600, and her serum bilirubin was 3.0 milligrams %. She continued her clinical improvement and by the 17th hospital day, her bilirubin was 1.5 with a serum alkaline phosphatase of 20.9 King-Armstrong units. At this time an intravenous cholangiogram was interpreted as showing very questionable areas consistent with common duct stones. Five days later serum bilirubin and alkaline phosphatase were normal. Because of the dubious value of the intravenous cholangiogram we performed a percutaneous transhepatic cholangiogram. As you can see from this film, there is an enlarged common bile duct, with stones in the common duct and hepatic ducts. This second film which was taken 10 minutes later, after the needle was withdrawn, definitely demontsrates a large stone at the ampulla. (Figs. 1 and 2.)

DR. WILSON: Tell us the timing of the percutaneous cholangiogram as related to the subsequent operation which was done, because I think this is an important point.

DR. JACKSON: The percutaneous cholangiogram was done approximately one hour prior to the operation. We feel that it is important to have this time relationship because of the possible complications of the procedure.



FIG. 1. Percutaneous cholangiogram with needle in place, demonstrating dilated intrahepatic ducts and common duct stones.



FIG. 2. Percutaneous cholangiogram after removal of needle.

DR. WILSON: I think the point is well taken. All of us know that a percutaneous cholangiogram may be made without any significant leakage of bile; however, if there is a marked obstruction of the common duct, it certainly would not be unusual to have some bile leakage following the introduction of a needle for this diagnostic study. Dr. Storer, would you continue the discussion?

DR. STORER: I might comment at this point about the technic of this procedure—it is somewhat hazardous and not to be

taken lightly. The patient needs to be in the hospital and on a broad spectrum antibiotic for at least 24 hours prior to the procedure. In addition, the patient is instructed on how he will be asked to breathe at the time the needle is inserted. He is asked to breathe deeply for a while so when asked to hold his breath, a prolonged period of apnea will be possible.

Under local anesthesia, a 6 inch, 18 gauge aortagram needle is introduced just below the costal margin, in the midclavicular line, aiming upward and inward. The patient holds his breath as the needle is inserted full length into the substance of the liver—he is then allowed to breathe quietly. Then as he holds his breath again, the needle is withdrawn while suction is applied, until bile is aspirated. After aspiration of as much bile as possible, about 20 cc. of 50% Hypaque is injected and films are exposed. Unlike angiography, there is no rush and rapid cassette changers are unnecessary.

In general, if there is ductal dilatation a duct should be struck on four passes with the needle. If no bile is aspirated on four passes, it provides evidence that there is no ductal dilatation. In the presence of biliary obstruction, the danger of bile leakage after percutaneous cholangiography is probably less than with needle biopsy, because in cholangiography bile is aspirated from the duct system and the pressure thus is relieved. If cholangiography is positive, we believe operation should be done as soon as possible. If, on the other hand, cholangiography is negative, the patient is not operated upon but is observed closely for evidence of bile or blood leakage.

DR. WILSON: Dr. Jackson, tell us about the findings at operation.

DR. JACKSON: At operation it was interesting that we found no bile leakage; indeed we could not definitely identify the point of needle puncture. The common bile duct was markedly enlarged, and on exploration of the duct 3 large stones were found, one resting in the right hepatic duct. After removal of the stones, graduated Bakes dilators were passed through the ampulla. They could be passed without resistance. A T-tube was then placed in the common duct and the subhepatic space drained.

DR. WILSON: Dr. Britt, Dr. Jackson didn't state what type of T-tube was used. I believe, and certainly hope that he used the conventional short limbed T-tube. Do you have any particular feeling with reference to the advisability or inadvisability of using the so-called long limbed T-tube which was popular several years ago?

DR. BRITT: I can't think of any real benefit from a long limbed tube that you can't derive from the usual short limbed tube. There is also the added danger with the long limbed tube of the possibility of obstructing the pancreatic ducts and causing a postoperative pancreatitis.

DR. WILSON: I do not think any of us were surprised at the diagnosis. It is interesting, however, that a patient should form common duct stones repeatedly, and I think it is always interesting to speculate on the reasons why this occurs. We know the majority of stones are formed in the gall bladder and most common duct stones come from the gall bladder. It is true, of course, that when a patient is operated upon to remove stones in the common duct, a stone may be overlooked. On the other hand, it is certainly true that all stones may be removed and a patient may form additional stones, without any evidence of stones having been previously overlooked. There seems to be good evidence that certain anatomic anomalies or variations may favor the development of recurrent common duct stones, particularly if there is some difficulty as regards proper drainage of the bile duct. I think perhaps more important is the fact that there are certain metabolic changes in certain patients which are not well understood that result in stones being formed. We have a 13 year old girl in the hospital at the present time, who has multiple stones in the gall bladder, and studies have not given any definite reason why this child should have stones. Dr. Jackson, do you have any suggestions regarding therapy or any particular medication that might prove helpful to our patient, at least in the immediate future, in causing her to pass small stones or sand, or gravel-like material which might other-

...om the ...xecutive ...irector

MEDICAL DIGEST

News of Interest to Doctors in Tennessee

SIGNIFICANT ACTIONS OF THE TMA BOARD OF TRUSTEES JULY 19, 1964

Highlights of the Quarterly Meeting Of the Board of Trustees—July 19

● A report was submitted relative to the audit made by the Internal Revenue Service of the records of TMA. A complete review of the examination was made by the Board and the matter of tax due on Federal Unemployment Compensation. The Board adopted a motion authorizing the Treasurer to pay whatever amount of tax was due following the negotiations and determination of any tax due by TMA.
——Approved a motion that the accounting firm to serve the Association for the following year be selected by the Board each year at its regular meeting in October.

Incorporation Of TMA

● The TMA attorney presented a Charter of Incorporation for TMA which required the signature of each member of the Board since it had been arranged for the members of the present Board of Trustees to become the original incorporators. Under the resolution adopted by the House of Delegates, when the charter is properly completed and the corporation established, all property of TMA will be transferred to the new corporation.

TMA Participation in Health Careers Program

● After restudying previous action, the Board adopted a motion to participate in the Health Careers program of the Tennessee Hospital Association Education and Research Foundation by nominating a representative to the Health Careers Committee. In addition, the Board voted to support the Health Careers program with a contribution of $2500. Any future financial support will depend on the financial position of TMA.

Property and Personalty Tax

● The Board studied a report regarding the decision issued by the Metropolitan Government of Nashville and Davidson County under which the real property of TMA would be taxed as well as the personalty (fixtures, equipment, supplies, etc.). The attorney for the Association reviewed the steps already taken seeking exemption from this tax in the Metropolitan Tax Equalization Board. A motion was adopted that the Board proceed with the action of appealing and petitioning for exemption before the State Board of Equalization.

Additional Legal Help In General Assembly

● Adopted a motion that the Chairman of the Legislative Committee with the assistance of TMA's attorney recommend to the Executive Committee of the Board the appointment of additional legal help during the 1965 General Assembly if necessary, and the final decision to be made by the Executive Committee. The same body will make the determination of the fee for such assistance.

TMA Journal

● Due to rising cost the Editor of the Journal described methods used in determining the size of the Journal. The Board adopted a motion that the Editor continue to publish the Journal on the basis of equal distribution of scientific material and advertising.

Other Actions

● Studied a letter from the Commissioner of Public Welfare

relating to revisions in the MAA program. Heard a report on the operation of the Medical Assistance to the Aged program, particularly dealing with the drug formulary.
——Accepted resignations from three members previously named to TMA committees.
——Referred to the Tennessee State Obstetrical and Gynecological Society a letter relative to therapeutic abortions. A request was made that the State Ob-Gyn Society recommend to the Board of Trustees action to be taken on the matter.
——Declined to lend financial support to the National Society for Medical Research re antivivisectionist, but offered legislative support by TMA on the issue.
——Heard a report from Dr. Bland Cannon on the principal actions in the June meeting of the House of Delegates of the American Medical Association. Received a recommendation for an active move to secure an additional delegate from Tennessee by requesting county medical societies to urge all physician members of county societies and the state association to become members of the American Medical Association.
——Approved the Second Quarter Financial Statement for the fiscal operations of TMA.
——Heard a report from Dr. Cannon relative to a headquarters suite at the annual and clinical conventions of the American Medical Association.

1966 ANNUAL MEETING

● The Board authorized that the 1966 Annual Meeting be scheduled for Gatlinburg and approved that negotiations be made for conducting the meeting in that location.

Changes in Group Insurance Coverage For TMA Members

● The Board studied a letter from the Chairman of TMA's Insurance Committee, setting forth changes in the group overhead expense plan and the major hospital plan for Association members. The Board approved a motion that the recommendation of the Insurance Committee be accepted which calls for minor changes in the plans.

Mental Health

● Approved a request from TMA's Mental Health Committee that TMA sponsor a one-day seminar on Alcoholism at a date to be selected during 1966.

Tax Deductibility Threat Posed in IRS Regulations

● Proposed regulations by the Internal Revenue Service to implement Section 3 of the Revenue Act of 1962 posed a threat to business-expense deductibility of expenditures incurred in connection with efforts to express personal views on all legislative issues. Affected would be dues payments to trade and professional associations or other membership organizations which may be engaged in legislative activities. (This would include TMA.) Steps are being taken to request the Acting Commissioner of Internal Revenue that a public hearing be called and that the effective date for the regulations be delayed for at least 60 days. Other interested organizations are taking similar steps.

The proposed regulations sets forth that "No deductions shall be allowed for any expenses incurred in connection with grass-root campaigns or any other attempt to urge or encourage the public to contact members of a legislative body for the purpose of proposing, supporting, or opposing legislation".

Tennessee Adoption Regulations

● Physicians asked to assist in adoption proceedings should be aware of the State Law which says that no person or agency except the Tennessee Welfare Department or an authorized agency may engage in placing children for adoption or be a party to an arrangement between prospective adoptive parents and natural parents for the placement of children for adoption.

Public Service

THE TENNESSEE TEN

Hadley Williams, Public Service Director

AMA Conducts P. R. Institute

● The whys and wherefores of effective medical public relations were given some 600 participants of the annual American Medical Association Public Relations Institute August 20-21 in Chicago.

The excellent day and a half meeting offered guidelines for state and county medical societies for producing better public relations, both internally and externally.

Mr. Jim Reed, Director of AMA Communications Division, outlined eight "musts" for effective public relations at the county level. Mr. Reed suggested that each county society should have: 1) an effective emergency call system; 2) an active grievance or mediation committee; 3) a continuing press relations program; 4) a speakers bureau; 5) an orientation program for new members; 6) a program to guarantee medical care for those unable to pay; 7) a community service program; and 8) an interest in civic affairs. Mr. Reed pointed out, however, that a county society can have all these activities but it cannot call its public relations program a success until it answers this final question: "Does the public know about them?"

A panel discussion by members of the press gave the Institute practical suggestions for better relationships between the two groups. Appearing on the panel was Stan Evans, editorial writer of the Indianapolis NEWS, Arthur Snider, science editor of the Chicago DAILY NEWS and Dolph Simons, publisher of the Lawrence (Kan.) JOURNAL WORLD. Jenkin Lloyd Jones, editor of the Tulsa TRIBUNE also spoke during the meeting and outlined medicine's urgent need for improvement of the professions standing in the public eye.

Mr. Jones pointed out that the demand for medical care, improved techniques, and other factors which have led to a decrease in the number of house calls have in fact raised the quality of care, but added that, "Whenever a real emergency fails to get a response, the scars go deep."

A program of public relations for the medical profession will work best at the local level, Jones said, and should be designed to show Americans that "doctors are seriously concerned with the public's welfare".

Walter W. Belson, public relations director of the American Trucking Association delivered a most interesting address at the Institute. Mr. Belson said an analysis of more than 21,000 successful and unsuccessful sales campaigns showed that there were four essential elements in every successful campaign. These are: 1) say what you have to say without wasting words—get right to the point; 2) answer the reader or listener's unspoken question, "What's in it for me?"; 3) prove it; and 4) repeat it.

Since all public relations activity is selling and every program of PR is a sales program almost by definition, the presence of these elements in successful campaigns and the absence of one or more in unsuccessful campaigns is extremely interesting, Mr. Belson said.

Drs. R. H. Kampmeier and James Thomasson and Mr. Jack Drury of Nashville, Dr. William T. Satterfield and Mr. Les Adams of Memphis, Mr. J. E. Ballentine, Mr. Hadley Williams and Mr. Bob Berry of TMA headquarters attended the meeting.

Improving Society Meeting Attendance

● A survey of 142 county medical societies regarding physician attendance at society meetings was reported on at the annual Medical Society Executives Association meeting in Chicago August 19th.

The Seven guidelines suggested by a committee of the association studying attendance at county medical society meetings were: 1) physicians will attend meetings which are definitely beneficial to them as individuals and as physicians; 2) physicians prefer to feel that they are participants, rather than members of a "captive audience", at society meetings; 3) meetings must start on time, be well-organized and conducted efficiently in a location easily accessible, and must end on time; 4) advance publicity on an upcoming meeting is essential. Such publicity can include direct mail pieces, published notices, telephone reminders, or a combination of all; 5) Coordination should replace competition for the physician's time. Some societies are combining hospital staff meetings with society meetings to reduce demands on physicians' time; 6) Socio-economic topics are the best drawing cards for meetings of larger societies, while scientific meetings are more attractive for members of smaller societies; and 7) Combined meetings with other professional men—attorneys, pharmacists, insurance representatives—at which mutual problems are explored are successful.

Mr. Jack Drury, Executive Secretary of the Nashville Academy of Medicine was a member of the MSEA study committee.

County Societies Get PR Manual

● The TMA Communications and Public Service Committee has mailed a copy of the AMA's Public Relations Manual to every county medical society president along with the PR Doctor reprint, "Organizing for Public Relations".

The TMA committee is urging each county society president to appoint a public service committee if none now exists and is encouraging those societies that have such a committee to engage in a stepped up program of public service.

The manual contains the "ABC's" of effective public relations—Aids and materials, Basic information and a Collection of projects.

Physicians Urged to Display Pamphlets

● Dr. R. A. Calandruccio of Memphis, Chairman of the TMA Communications and Public Service committee has written every member of TMA urging their cooperation in the committee's efforts to tell medicine's story to the public.

Each physician is being asked to consider the purchase of a pamphlet rack for their waiting room stocked with current health information materials. A catalog of materials available from AMA was included with the letter.

Dr. Calandruccio said, in explaining the purpose of the letter, "Physicians in the United States talk with more than two million patients in their offices each day. Materials taken from pamphlet racks help patients to better understand many of the complicated aspects of our modern day practice, and they appreciate having the material made available."

"The future of American medicine hinges upon the opinion the public holds about our medical care system and medical men. Whether our profession has good or bad public relations depends upon the individual efforts of every physician", Dr. Calandruccio said.

Thought for the Month

● "Our American heritage is threatened as much by our indifference as it is by the most unscrupulous office or by the most powerful foreign threat. The future of this Republic is in the hands of the American voter." . . . Dwight Eisenhower

wise accumulate and form another large stone.

DR. JACKSON: We frequently utilize drugs which act as choleretics, which seem to thin the bile and increase the quantity of the bile. This appears to help in prevention of stone formation in the biliary system. This patient had previously been treated with Decholin. However, this failed to prevent the formation of stones in her case.

DR. WILSON: Dr. Storer, it seems to me this patient has had a satisfactory course and certainly the patient has been helped. Tell us what your approach will be if she should be so unfortunate as to develop more stones in the common duct.

DR. STORER: We certainly hope that another operation on this elderly lady won't be necessary. If she reforms common duct stones, after removal of the stones we will probably want to do a drainage procedure between the dilated common duct and the gastrointestinal tract. This can be done in one of two ways. Either a side-to-side anastomosis between the common duct and adjacent duodenum or by an end-to-end choledochojejunostomy en-Roux-Y.

DR. WILSON: I think I would agree, and personally I would probably be inclined to do a wide anastomosis between the duodenum and the common duct. The question has been raised in cases of this type as to whether or not this may not lead to an ascending cholangitis. Actually, in the few patients in whom I have used this procedure there has been no difficulty with ascending cholangitis, as long as there was an adequate anastomosis. I believe this is due to the fact that the bile pressure helps prevent ascending infection. Our experience with reference to the duodenum for anastomosis, or the Roux-Y, defunctionalized loop of jejunum for anastomosis to the proximal end of the common duct in patients with stricture of the common duct has been somewhat similar. In other words, we would perform whichever operation was easier to carry out in a given patient. I might also mention that simply because we perform an adequate anastomosis between the common duct and the duodenum does not mean that the patient may still develop stones which will cause pain and other difficulties. We have had occasion to see a patient who had been operated upon when she was 78, and after stones were removed from the common duct a large anastomosis was made between the common duct and duodenum. This particular patient returned again at age 88. We operated and found numerous stones in the common duct, although the anastomosis between the common duct and duodenum, which was still patent, prevented the patient from having jaundice and perhaps prevented the patient from having fever, since there seemed to be no actual obstruction. The stones were removed, and this 88 year old patient was left with the anastomosis which had previously been made; her course since operation has been uneventful.

DR. WILSON: Dr. Britt, how long do you think this tube should be left in the common duct?

DR. BRITT: I would leave this tube in approximately 10 days and then do a T-tube cholangiogram. If I found this to be normal, and there was a good flow of clear bile, I would remove the tube. However, if the T-tube cholangiogram appeared normal and we were still getting murky bile with fragments of stones, sand and gravel, I would continue to irrigate the tract, possibly for another week, and repeat the cholangiogram. In addition, I think this patient, since she did have an ascending cholangitis and a choledochitis, should be maintained on antibiotics in an attempt to decrease the inflammatory reaction in the duct prior to removing the tube. Certainly if the tubes are left in for a prolonged time, they in themselves can develop a number of concretions and actually cause the formation of stones in the common duct.

DR. WILSON: Thank you, Dr. Britt. Actually, I believe the postoperative T-tube cholangiogram is normal on this patient and I think that in the near future this tube will be removed.

Nashville Metropolitan General Hospital

Perforation of the Puerperal Uterus*

The case for this morning's discussion will be presented by Dr. Joseph Pryor.

DR. PRYOR: This 17 year old colored female, gravida 2, para 1, abortus 1, delivered at term on Apr. 12, 1964. The main problem she had during her pregnancy and delivery was that of low hemoglobin. On the 2nd day postpartum the Hgb. was 9 Gm. and therefore she was placed on Iron Dextran (Imferon) 4 ml. daily for 4 days.

On May 2 (3 weeks postpartum) she was admitted with complaints of chills, fever, abdominal pain and vaginal bleeding and was diagnosed as having parametritis and pyelonephritis. The urine culture grew *B. aerogenes*. The patient was treated with chlorophenicol and penicillin intravenously for 2 days and orally for 4 days and responded well. On one occasion while in the hospital on this admission, it was noted that she had a slight amount of vaginal bleeding; however, this stopped after a short period of time. Admission hemoglobin was 10.3 grams. The patient received Iron Dextran (Imferon) while in the hospital. Hemoglobin was 11.2 grams just before discharge on May 7, 1964.

On May 13, 1964 she was again seen in the Emergency Room and gave a history of vaginal bleeding, abdominal cramping and chills. On pelvic examination she was found to have a mixture of fresh blood and brownish foul discharge in the vaginal vault. Her uterus was the size of a 4 months pregnancy and was very soft. Other physical findings were not remarkable. She was admitted with the diagnoses of subinvolution of the uterus and probable retained secundines. Cultures taken of the cervix and vagina grew *B. aerogenes* and Diphtheroids respectively. Admission Hgb. was 9.6 Gm. and PCV. 28%.

On May 14 the patient was taken to surgery for a dilatation and curettage. On sounding the uterus it was noted that the sound passed by its own weight to a depth of 9 inches on the right and 6 inches on the left cornual regions. At this time it was suspected that the uterus was perforated. The operation was stopped at this point and the patient was taken to the recovery room. Because of the patient's clinical course of postpartum bleeding, it was thought that curettement should be completed, but due to the friable condition of the uterus, it was decided the safest approach would be that of simultaneous exploratory laparotomy and D & C using two separate teams. The patient was therefore taken back to surgery for this purpose, and placed in the lithotomy position. Upon opening the abdomen fresh and clotted blood amounting to approximately 150 cc. was noted. A 1 cm. laceration was found on the right side of the fundus, 2 cm. from the right cornu. A few pieces of loose tissue identified as uterine tissue were removed from the abdominal cavity and sent to the laboratory for culture and sensitivity studies. At this point a member of the laparotomy team placed his hand around the fundus of the uterus while a member of the "team below" carried out dilatation and dull curettement of the uterus. This produced a large amount of necrotic, loose appearing tissue. The perforation was then repaired and the abdominal cavity irrigated with solution containing kanamycin sulfate (Kantrex) and then closed. Cultures taken revealed no growth of organisms. Postoperatively, the patient was placed on I.V. antibiotics, received tranfusions of whole blood on two occasions and recovered fully.

Two days before discharge the Hgb. was 12.9 Gm. and PCV. 36%. She was discharged on the 10th hospital day.

Pathologic Report. "The scrapings showed masses of proliferative endometrium and also ragged fragments of myometrium which were incompletely involuted and which showed considerable infiltration by chronic inflammatory cells. No placental tissue was seen. The tissue from the abdominal cavity showed ragged fragments of myometrium which was bordered on one side by slightly proliferative endometrium. This tissue showed no significant inflammation."

DR. WALTER DERRYBERRY: It must be remembered that this subinvoluted uterus was the size of a 4 months pregnancy. When the probe was passed with seemingly no resistance to a depth of 9 inches, I think the operator did the right thing in carefully passing the probe to the other side of the uterus and found that in this direction, it only passed for a distance of 6 inches as compared with 9. In spite of the fact that Pitocin was being given, the uterus responded poorly and a diagnosis of perforation of the uterus seemed certain.

DR. JOHN WIERDSMA: When we were confronted with this situation, consultation was called. We know that perforation of a septic uterus is especially dangerous and a decision was reached to complete the curettement and repair the defect in the uterus at the same time. The patient was placed in lithotomy position and a tenaculum placed on the anterior lip of the cervix. From the abdominal side, after opening the abdomen, the operator's hand was placed around the uterus, the thumb anteriorly and the fingers posteriorly. The operator from the vaginal side now completed the dilatation and curettage. Because of the patient's youth, a hysterectomy was undesirable. The uterus was exceedingly fri-

*From the Department of Obstetrics and Gynecology, Nashville Metropolitan General Hospital, Nashville, Tenn.

able, but with the operator's hand encircling the uterus, the curettement could be completed with very little chance for further damage. This procedure worked excellently, and following the curettement the defect in the uterus was closed with interrupted sutures. After irrigating the peritoneal cavity the abdomen was closed in the usual manner.

DR. FRANK WHITACRE: Perforations of the uterus are rare. As related to the treatment of incomplete abortions, the incidence is only 0.5%. When one speaks of perforation of the uterus, the sudden conclusion is that rough and inept handling of the procedure was present, but this is not the case regarding the patient under discussion. Perforation can also occur during the most exacting and skillful curettements when the uterus is pathologically soft and friable. Such a situation is especially apt to occur in sepsis during the puerperium, which is exactly the situation in this case. There are those who might have temporized after the diagnosis of uterine perforation was established, but I believe that the treatment of this patient was carried out well and exactly as it should have been. The main reason for reporting this case is to point out the advantage, in such an accident, of having an operator's hand from above around the soft uterus while a curettement is carried out from below for it makes further damage most improbable.

I hope that this report will not be interpreted as recommending that all perforations of the uterus should be managed from the vaginal and abdominal approach simultaneously. However, in the presence of the facts as stated in this particular case, the procedure has merit.

President's Page



Dr. Kampmeier

Someone has said that when the Times have needed a man he has appeared. Recent times have needed a man to speak for Medicine—he appeared as Dr. Edward Annis, the surgeon from Miami. Events and his talents met to strike fire, and light an image which few who have heard him speak will forget even if his words may not be remembered.

His feats of endurance as measured in numbers of addresses and miles traveled will become legendary and most likely many apocryphal stories will grow in coming years. No matter how sophisticated the listener, I have yet to speak with anyone who has not rated this man as an outstanding speaker. Those who have heard him upon a number of occasions have been amazed at the breadth of his knowledge and the manner in which he can impart his knowledge. Speaking without notes and apparently extemporaneously, he has that remarkable ability of adapting the phraseology, definition and facts to his audience,—whether lay or professional or an admixture of both. Whether speaking to doctors, to medical students, to service clubs, to politicians or to women's groups, the effect is the same as measured in the attentiveness of the listeners. It is enlightening to let the eyes rove over the audience. There is interest drawn in every face, even in those who heartily disagree with the speaker and his philosophy.

Rather than having a record of service in "organized" medicine, Dr. Annis had contributed as a citizen of Florida on the Governor's Citizens Medical Committee on Health in 1959, and in Family Service and in the Division of Welfare Planning. As Chairman of the Legislative Committee of the Dade County Medical Association his abilities as a debater became recognized and he soon was enrolled in the Speaker's Bureau of the AMA and became its Chairman. Shortly his television appearances—the address to the empty seats in Madison Square Garden as a rebuttal to the late President's appeal for support of the King-Anderson bill, and face to face debates with Senator Humphrey and again with Walter Reuther—made Dr. Annis a national figure. By the democratic processes of the House of Delegates, Dr. Annis, who had never been a Delegate nor a Trustee, became President-elect and President of the AMA. To the thousands who heard him in person and to the millions who saw and heard him on the TV screen, he presented a face of medicine not soon to be forgotten, in the factual, unemotional, pragmatic and above all in the sincere exposition of his thoughts and those of thinking doctors.

It was about twenty years ago that the AMA was shaken out of its preoccupation with things for which it was organized,—medical education, safeguarding the public in drugs, quackery, foods, nutrition, and its health generally. It was when the politicians began to tamper with the nation's health and catapulted the profession into the socio-economic ring. When the pressure for medical social legislation reached an all-time high the Man for the Times appeared.

As Dr. Annis relinquished the Presidency he spoke a few valedictory words summing up in simple form what the American doctor represents. These words, which all should read, deserve a permanent record in the Journal and therefore are set down on the editorial page. And with this go thanks to the "Man of the Times" for his contribution to American medicine and for the role of advisor and doer which he is certain to fill in coming months.



President

THE JOURNAL

OF THE
TENNESSEE MEDICAL ASSOCIATION

Published Monthly
Devoted to the Interests of the Medical Profession of Tennessee
Office of Publication, 112 Louise Avenue, Nashville 5, Tenn.

Acceptance for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized July 15, 1932.

Copyright for protection against republication. Journals of the American Medical Association and of other state medical associations may feel free to quote from this Journal whenever they desire merely giving credit to this publication.

Address papers, discussions and scientific matter to R. H. Kampmeier, M.D., Editor, B-4211 Vanderbilt University Hospital, Nashville 12, Tennessee
Address organizational matters to Jack E. Ballentine, Executive Director, 112 Louise Avenue, Nashville 5, Tenn.

R. H. KAMPMEIER, M.D., Editor
Vanderbilt University, School of Medicine, Nashville, Tenn.

ADDISON B. SCOVILLE, JR., M.D., Assistant Editor
2104 West End Ave., Nashville, Tenn.

COMMITTEE ON SCIENTIFIC WORK AND POST GRADUATE EDUCATION
R. H. Kampmeier, M.D., Chairman
W. Powell Hutcherson, M.D., Chattanooga
Robert P. McBurney, M.D., Memphis
Eugene J. Spiotta, M.D., Memphis
(Specialty Society Representatives to be named)

SEPTEMBER, 1964

EDITORIAL

REMARKS OF FAREWELL BY DR. EDWARD R. ANNIS

As I leave the Presidency of the American Medical Association I am given to many emotions. But the strongest is a deep sense of appreciation to all of you who have given me these two years, and to all who made them so memorable.

I must admit I've had the time of my life! What a delightful land we live in! What fine people are ours to know and to serve! As such we learn continually—about our profession and our country—we learn the great medical good that is daily as much a part of small towns and little hospitals as it is of the magnificent medical centers that dot the land.

There is no physician who is not important to his profession and his Association. You are the one link your patients and neighbors have with that amazing organization about which they hear so many conflicting reports. Your care for their good represents Medicine's sworn dedication. Your opinion on the many socioeconomic aspects with which we *must* be concerned makes *you* the "official" spokesman for the AMA. Your citizenship—community activity which builds as well as corrects—helps break down that myth that the doctor oversteps his boundaries when he leaves the hospital and campaigns for the best man in a general election. When you withdraw from the life around you, Medicine is out of touch.

When you vocally respect the hundreds of professions which have made our science grow so miraculously, Medicine is realistic. When you take yourself too seriously, Medicine becomes a pompous profession. When you support your local and state medical society, Medicine is united for the common good. When you fail to do so, Medicine is a house divided. But if I have given a full measure of devotion to you I am no different from thousands of our colleagues across the nation, who represent the finest in our profession by serving their patients loyally, with dedication and with good humor. If, in leaving this office, I can wish for you the great satisfaction of being a physician who is a citizen, a neighbor, an humble friend to his colleagues and his patients, then *more* I *cannot* wish you. *(San Francisco, June 21, 1964.)*

DEATHS

Dr. Charles S. Gelbert, 69, Tazewell, died August 4th at Fort Sanders Hospital, Knoxville.

Dr. George Marion Richmond, 83, Oswego, died August 16th at St. Mary's Hospital in Knoxville.

Dr. Raymond Steadman, 52, Kingsport, died August 22nd after several months illness.

Dr. Leon Pope, Grand Junction, 77, died August 20 at Baptist Hospital in Memphis.

Dr. Arthur Hooks, Bristol, 85, died on August 8th.

PROGRAMS AND NEWS OF MEDICAL SOCIETIES

Roane-Anderson County Medical Society

On August 1st, the Society sponsored a symposium on injuries in high school athletics at the Daniel Arthur Rehabilitation

Center in Oak Ridge. School Superintendents, school principals, coaches, trainers, game officials, physicians and other interested persons attended the symposium designed for area high school coaches on how to better protect high school athletes.

The regular monthly meeting was held on August 25th in the Oak Ridge Hospital. Guest speaker was Dr. Bertram E. Sprofkin, Clinical Professor of Neurology at Vanderbilt University School of Medicine, Nashville. His subject was "Neurology of Office Practice."

Nashville Academy of Medicine Davidson County Medical Society

The Academy held a dinner meeting on September 8th in the Baptist Hospital Medical Auditorium. The scientific presentation by Dr. Keigh Reemtsma, associate professor of surgery and director of research at Tulane University School of Medicine, was entitled "Renal Heterotransplantation in Man."

A business session preceded the scientific program.

Memphis-Shelby County Medical Society

The Memphis and Shelby County Medical Society met in regular session in the auditorium of the Institute of Pathology on September 1st. The scientific program was presented by the Department of Surgery, University of Tennessee. Speakers and their subjects were: Dr. Louis Britt, "Acute Iliofemoral Thrombosis"; Dr. Paul H. Sherman, "Scalene and Thoracic Duct Node Biopsy in Pulmonary Disease Diagnosis"; Dr. James W. Pate, "Thoracic Emergencies in Infancy"; and Dr. Lee W. Milford, "Emergency Hand Surgery."

Chattanooga-Hamilton County Medical Society

A paper entitled "Latest Advances in Otologic Surgery" was presented by Dr. Charles H. Alper at the September 8th meeting of the Chattanooga-Hamilton County Medical Society. In addition to a case report by Dr. Augustus McCravey, members of the Grievance Committee discussed the functions of the committee. The meeting was held in the auditorium of the Interstate Building.

Knoxville Academy of Medicine

Members of the Academy heard Dr. Gould Andrews, Director of the Oak Ridge Institute of Nuclear Studies Medical Division, and Dr. Francis Jones, chief pathologist at the University of Tennessee Memorial Research Center and Hospital, discuss "The Clinical Application of Radio-Isotope Scanning Techniques" at its monthly meeting on August 11th in the Academy of Medicine Building.

NATIONAL NEWS

The Month in Washington
(From the Washington Office, AMA)

Congress for the first time has authorized funds for modernization and renovation of hospitals. The modernization and renovation program was included in legislation that extends the Hill-Burton hospital construction program for five more years. The legislation easily won approval in both the House and Senate.

The extension provides $840 million for construction of hospitals and public health centers and for the modernization of health facilities. Of that amount, $680 million is designated for construction and $160 million for modernization with a provision that up to $350 million of the construction funds can be switched to modernization if a state deems it preferable.

The new law also provides:

—$350 million for construction of long-term facilities, including nursing homes and chronic disease hospitals.

—$100 million for construction of diagnostic or treatment centers.

—$50 million for construction of rehabilitation facilities.

—$7.5 million in matching grants for area-wide health facility planning in metropolitan and other areas. Under this project, states can use up to 2% of their allotment to improve state administration of the construction program.

★

The Food and Drug Administration has ordered that drugs containing Phenacetin (acetophenetidin) be relabeled to bear a warning against kidney damage. The order becomes effective October 6, 1964. The new labeling follows: "Warning—This med-

ication may damage the kidneys when used in large amounts or for a long period of time. Do not take more than the recommended dosage, nor take regularly for longer than 10 days without consulting your physician."

The labeling change was based on a report by a special advisory committee which concluded after a study of the pain-relieving drug that there is probable cause to conclude that misuse and prolonged use of the drug have been responsible for kidney lesions and disease.

The FDA also has banned and seized a number of "sustained action" or "time disintegration" cold capsules on charges of false claims. The agency said that the products are manufactured by only a few firms for distribution under more than 100 private brand names.

The over-the-counter products are generally labelled as providing up to 12 hours of continuous relief of excessive nasal discharge, running nose, watering of the eyes, swelling of the nasal tissues and stuffy congested feeling caused by the common cold and hay fever, the FDA said.

Dr. Joseph F. Sadusk, Jr., FDA Medical Director, said the seized products contain too little of active ingredients to be effective over a 12-hour period. Should a capsule contain an effective dose for a 12-hour period, he said, "a new drug" approval would be required to assure safety and efficacy.

★

The Public Health Service has approved the strengthening of influenza vaccines and is again urging that the so-called "high-risk" groups be inoculated against the respiratory disease—between September 1 and December 15 this year.

The PHS acted upon the recommendations of the special committee on immunization practices which reported that flu vaccines had been shown "in repeated control trials to confer a substantial protection (60 to 80%)."

The incorporation of recent A_2 and B isolates in the 1963-64 vaccine and the increase in their concentration during 1964-65 should result in a vaccine capable of conferring substantial protection in 1964-65, the committee said. It was pointed out, however, that as yet there has been no opportunity to evaluate the newly constituted vaccine under conditions of a natural challenge.

The committee foresaw no major influenza outbreak in the United States this year but recommended inoculation since there is always a possibility of local outbreaks.

The committee recommended that immunization should be considered and generally recommended for persons in groups who experience high mortality from epidemic influenza. The committee said such groups include:

"a) Persons at all ages who suffer from chronic debilitating disease, e.g., chronic cardiovascular, pulmonary, renal or metabolic disorders; in particular:

"1. Patients with rheumatic heart disease, especially those with mitral stenosis (abnormal narrowing of one of the heart valves).

"2. Patients with other cardiovascular disorders such as arteriosclerotic heart disease and hypertension, especially those with evidence of frank incipient cardiac insufficiency.

"3. Patients with chronic bronchopulmonary disease, for example, chronic asthma, bronchitis, bronchiectasis (degeneration and inflammation of the bronchial tubes), pulmonary fibrosis (scarring), pulmonary emphysema, and pulmonary tuberculosis.

"4. Patients with diabetes mellitus (the common form) and Addison's disease (caused by malfunction of the adrenal glands).

"b) Persons in older age groups. During three successive recent epidemics a moderate increase in mortality has been demonstrated among persons over 45 years and a marked increase among those over 65 years of age.

"c) Pregnant women—It is to be noted that some increased mortality was observed among pregnant women during the 1957-58 influenza A_2 epidemic both in this country and abroad. It has not, however, been demonstrated in subsequent years."

MEDICAL NEWS IN TENNESSEE

University of Tennessee College of Medicine

Twenty-two physicians who have served their communities fifty years will receive Golden "T" certificates at the commencement of the University of Tennessee Medical Units, September 20. The honorees re-

ceived degrees 50 years ago from UT or institutions which became part of the University. Tennessee physicians to receive certificates are: Drs. William C. Colbert, Wilford H. Gragg, Sr., John A. McQuistion, Frank T. Mitchell, and Cecil E. Warde, all of Memphis; Dr. Walter Joe Johnson of Pulaski; Dr. Elisha B. Paschall, Paris; Dr. Divine T. Chambers, Norma; Dr. Ulysses G. Jones, Johnson City; Dr. Jacob M. Ousley, Maryville; and Dr. Joseph W. Presley, LaFollette.

★

Dr. Gene H. Stollerman, professor of medicine at Northwestern University Medical School in Chicago, will become professor and chairman of the department of medicine January 1, 1965. Dr. Stollerman succeeds Dr. L. W. Diggs who has been acting chairman of the department since last January.

★

Dr. Glenn Clark, chief of staff of Memphis city hospitals and chairman of the Division of Rheumatology at UT, has been named assistant dean of the college for hospital affairs. Dr. Richard R. Overman, professor and chairman of the division of Radiation Biology at the College, has been named assistant dean for research affairs.

★

A special loan fund for needy students has been established by a former student. Under the provisions of the will of the late Dr. Boone Scott, a general practitioner in Lake City, $75,000 will be available for low interest student loans.

★

The National Science Foundation has made a $40,000 grant for research in the mechanism of enzyme action under the direction of Dr. Bruce M. Anderson, the department of biochemistry. The purpose of the research is to discover more information concerning the connection of enzymes to fundamental body processes. Dr. Anderson will be aided in the research by Dr. Marjorie L. Reynolds.

St. Jude Hospital

A three-year cancer research training grant for $313,884 has been awarded to the hospital by the National Cancer Institute. The grant is designed to help fill a critical need for physicians and scientists skilled in cancer research. It will be used for predoctoral and postdoctoral training in clinical and biologic work associated with cancer research. It will also help support the hospital's research seminars which bring prominent scientists from throughout the nation to discuss latest developments in medical research. Recipients of fellowships under the grant will work with the hospital's staff.

Health and Hospitals Planning Council—Nashville

Dr. Karl S. Klicka, president of Appalachian Regional Hospitals of Lexington, Kentucky, was guest speaker at the organizational meeting of the Nashville Metropolitan Region Hospitals Planning Council on July 30th.

The newly formed Council will study local hospital needs and work with hospitals and other medical facilities in planning future community health services. Dr. Chas. C. Trabue, IV, was named president of the Council and the other officers include leading businessmen and key citizens of the community.

State of Tennessee Department of Public Health

Health Department Initiates New Case Finding and Training Program for Preschool Deaf.

Federal funds have been made available to Speech and Hearing Service, Tennessee Department of Public Health, for an intensive program of early case finding and home training for severely hard-of-hearing and deaf children. These children are usually referred for evaluation at about 2 and 3 years of age when they fail to develop speech; actually they should be referred no later than at 6 months of age. Efforts will be made to acquaint the general practitioner, the pediatrician and the Public Health Nurse with the early signs of deafness. In any interview with a parent the question should always be asked: "Do you feel your baby can hear?" Danger signals of which the physician should be aware are: (1) failure of a neonate to exhibit a startle reflex in response to a sharp clap within 3-6 feet; (2) failure of a 3 month old child to develop auditory

orienting reflexes; (3) failure of a 8-12 month old child to turn toward the source of whispered voice, the sound of a rattle, or a spoon in a cup, originating with 3 feet behind the child while his attention is diverted to something in the foreground; (4) failure of a 24 month old child to identify objects by verbal stimulus, failure to repeat a word with a single stimulus; failure to repeat a phrase or use short phrases in talking; (5) failure of a child to respond to ordinary loud sounds; (6) failure of the child to use speech to communicate, using gestures instead. If a baby exhibits any of these danger signals, he should be referred for audiologic evaluation.

In this early screening, emphasis should be placed upon screening the so-called high risk babies—if the mother had rubella during the first trimester of pregnancy; if RH incompatibility existed; if there has been a history of familial deafness; and if the baby was premature. It is hoped physicians will refer all such cases to the County Health Department so Speech and Hearing Service may screen these youngsters and, if necessary, refer them for complete audiologic evaluation at one of the speech and hearing centers.

If deaf children are not referred for assessment and training until they are 2 or 3 years old, too much valuable time has been lost. The earlier auditory training, and speech and language stimulation are initiated the better is the prognosis for near normal language and speech achievement. - - -

It is hoped that all physicians in the State will assist in making this new case finding program a success.

PERSONAL NEWS

Dr. Robert M. Fisher is now associated in the practice of general medicine with Dr. Paul F. Teague at the Medical Center in Parsons.

Dr. David McCroskey, ophthalmologist, has opened offices in Maryville at 611 Washington Avenue.

Dr. M. M. Young, Chattanooga, director of the city-county health department, has been accepted as a member of the American Board of Preventive Medicine.

Dr. Jack Adams, Chattanooga, was the principal speaker at a recent meeting of the Brainerd Kiwanis Club.

Dr. James Callaway has opened an office as surgeon with Dr. Lea Callaway and Dr. Henry Callaway, Jr. in Maryville.

Dr. Norman S. Propper, formerly with the Wise Memorial Hospital as chief of the department of gynecology and obstetrics, plans to begin private practice in Kingsport.

Dr. R. C. Kimbrough, Madisonville, oldest surviving alumnus of the Class of 1903 of Hiwassee College, was awarded a certificate of Merit by the College on July 26th.

Dr. Jesse E. Adams, Chattanooga, was a guest speaker before the Tennessee Society of Professional Engineers local chapter.

New staff officers of the McNairy Hospital are: **Dr. Montie Smith, Jr.**, Chief of Staff; **Dr. T. N. Humphrey**, Vice-President; and **Dr. Harry L. Peeler**, Secretary.

Dr. D. P. McFarland, III, has joined the staff of Queen City Infirmary in Tullahoma. Dr. McFarland will specialize in general medicine and pediatrics.

The Medical College of Georgia has announced the appointment of **Dr. Robert C. Moffatt** of Cleveland to the resident staff in the Department of Surgery of the college's teaching hospital (Eugene Talmadge Memorial Hospital).

Dr. William Edward Rowe, a native of South Carolina, has become associated with Dr. Guy K. Terrell in the practice of general surgery in Chattanooga.

Dr. Armando de Vega is now associated with Dr. A. G. Carabia in the practice of pathology at the Oak Ridge Hospital.

Dr. Eugene Zachary, Knoxville, physician with the Student Health Service at UT, has been named director of the Student Clinic and Hospital. **Dr. Charles F. George**, Knoxville, has been named college physician at the Clinic and Hospital.

Dr. S. L. Bicknell, formerly of Memphis, has moved to McKenzie to take over the practice of the late Dr. E. E. Edwards.

Dr. A. Roy Tyrer, Jr., the first physician from Memphis to serve aboard the now-famous hospital ship HOPE will return to the ship October 15th for a month of volunteer work. **Dr. Nicholas Gotten**, Memphis Neurosurgeon, will serve aboard the ship in November.

Dr. William Blanks has opened offices as a radiologist with Dr. Thomas Proctor and Dr. John Bowen in Maryville.

Dr. Helen Richards, Athens, is now associated with Foree Hospital in the practice of general medicine.

Dr. James R. French has joined the medical staff at Children's Clinic in Jackson.

BOOK REVIEW

Fundamentals of Voluntary Health Care. George B. de Huzzar, M.D. The Caxton Printers, Ltd., Caldwell, Idaho, 1962. 457 pages. Price $6.00.

This book contains some 30 presentations by as many contributors to a Symposium whose format involved two parts. (1) The Moral, Biological and Economical Framework, and (2) Basic Issues of Voluntary vs. Compulsory Health Care. This

is not merely a one-sided statement on voluntary vs. compulsory health care, but considers the background of charity, the nature of the welfare state, and the importance of the individual and the danger of dependency as viewed from the biologic and psychologic viewpoints. In the second part are considered some of the issues of voluntary vs. compulsory health medical care, the role of the government and also an excellent consideration of voluntary health care or insurance. The more than two dozen authors are persons of standing in the field of economics, insurance, as representatives of the medical profession. The whole represents a broad spectrum of considerations which should permit the reader, no matter what his bias, to evaluate all aspects of this important problem which faces the American public.

Modern Treatment. A Bi-Monthly Publication. Vol. 1, No. 1. January 1964. Treatment of Renal Disease, Guest Editor, E. Lovell Becker, M.D. Treatment of Thyroid Disease, Guest Editor, Edward A. Carr, Jr., M.D. New York: Hoeber Medical Division of Harper & Row, Publishers. Annual Subscription $16.00.

Another of several recent review type of publications, this is the first of a bimonthly series designed to "keep the physician abreast of the dramatically advancing front of medical therapy." Other issues are planned to deal with the anemias, liver disease, epilepsy, cardiac arrhythmias, pulmonary disease and infectious diseases. The book is an attractive "paper-back" and its physical make-up is conducive to reading. The tone of the material varied a good bit from chapter to chapter since each is written by one of several authors. For example, the chapter on chronic renal failure is a concise article written by a clinician and gives a good up-to-date summary of the management of this problem. The chapter on acute pyelonephritis is succinct and easy reading. Such chapters will be of special interest to those who do not deal intimately with such patients but do desire keep up with advances in all areas. The chapter on diuretics is much less interesting and is concerned largely with a discussion of the mechanism of action of various diuretics. While in itself important, such material is not as likely to appeal to the busy practitioner reading a review type publication.

If the material is kept concise and directed toward the clinician, this series should find readers among those who seek to keep abreast in all fields of medicine and need to be brought up to date and among the specialists who desire summary type articles.

Financing Medical Care. Helmut Schoeck, The Caxton Printers, Ltd., Caldwell, Idaho, 1962. 312 pages. Price $6.00.

The author, a professor of sociology, is editor of a collection of commentaries of systems providing medical care under gvernment of seven foreign countries. The dozen or so writers are economists, actuaries, physicians, professors of medicine and statesmen. The countries whose governmentally sponsored health programs are described are Great Britain, France, Germany, Austria, Sweden, Switzerland and Australia.

Anyone interested in any form of governmental support for health care will find this book absolutely essential for background information.

ANNOUNCEMENTS

Vanderbilt University School of Medicine Postgraduate Courses

The Departments of Orthopedic Surgery and of Medicine will conduct a Postgraduate Day on Thursday, October 29 on "Management of the Arthritis Patient." Current trends in the management of the arthritic patient will be presented, emphasizing practical therapeutic measures. Participating in the demonstrations will be members of the Physical Therapy Service. Time will be allowed for discussion of problem cases as requested by the participants in the course.

This course is acceptable for 6 accredited hours by the American Academy of General Practice. Tuition is $15, which includes the luncheon. For further information address the Division of Continuing Education, Vanderbilt University School of Medicine, Nashville, 37203.

★

The Departments of Pediatrics, Medicine, and Preventive Medicine will present a three-day postgraduate course, November 11-13, entitled "A Symposium on Infectious Diseases—Family Infections." This Symposium will be focused on selected problems in diagnosis, treatment and prevention of infections which may affect all ages within a family. The subject matter will fall into the categories of Enteric Viruses and Gram-negative Bacilli, Respiratory Viruses—Streptococci and Staphylococci, and *Histoplasma capsulatum* and Atypical Mycobacteria. The Faculty of Vanderbilt University School of Medicine will be assisted by visiting lecturers: Dr. Dorothy Horstmann of Yale University; Dr. Warren F. Wheeler of the University of Kentucky; Dr. George Jackson of the University of Illinois and Dr. Floyd Denny of the University of North Carolina.

This course is acceptable for 18 accredited hours by the American Academy of General Practice. Tuition is $60, which includes lunches. For further information address the Division of Continuing Education, Vanderbilt University School of Medicine, Nashville, Tenn. 37203.

AMA Council on Medical Service

"Conservation of the Health Care Dollar" is the theme of the Fourth National Congress on Voluntary Health Insurance and Prepayment to be held in Las Vegas, Nevada, October 2-3, sponsored by the Council on Medical Service and the Committee on Insurance and Prepayment Plans.

Calendar of Meetings, 1964

State

Sept. 28-29 —Tennessee Valley Medical Assembly, Tivoli Theatre, Chattanooga

Oct. 29 —The Management of the Arthritides, Vanderbilt University School of Medicine, Nashville

Nov. 4-6 —Annual Assembly of Tennessee Academy of General Practice, Gatlinburg Auditorium

Nov. 6 —East Tennessee Heart Association in conjunction with TAAGP, Gatlinburg

Nov. 11-13 —Family Infections—Vanderbilt University School of Medicine, Nashville

Regional

Oct. 11-14 —Medical Society of Virginia, Golden Triangle Hotel, Norfolk

Oct. 13-15 —Indiana State Medical Association, Murst Temple, Indianapolis

Nov. 16-18 —Medical Society of District of Columbia, Statler-Hilton Hotel, Washington, D. C.

Nov. 16-19 —Southern Medical Association 58th Annual Meeting, Memphis

National

Oct. 5-9 —American College of Surgeons, Conrad Hilton Hotel, Chicago

Oct. 8-10 —American College of Physicians, Biltmore Hotel, Los Angeles, Calif.

Oct. 8-10 —Association of American Physicians and Surgeons, 21st Annual Meeting, The Roosevelt Hotel, New Orleans, Louisiana

Oct. 10-14 —American Society of Anesthesiologists, Americana Hotel, Bal Harbour, Florida

Oct. 11-16 —American Society of Plastic and Reconstructive Surgeons. Fairmont Hotel, San Francisco

Oct. 15-21 —Association of American Medical Colleges, Denver Hilton Hotel, Denver

Oct. 16-24 —American Academy of Ophthalmology and Otolaryngology, Palmer House, Chicago

Oct. 28-30 —American Cancer Society, Biltmore Hotel, New York

Nov. 28-29 —American College of Chest Physicians (Interim Meeting), Fontainebleau Hotel, Miami Beach, Fla.

Nov. 29-Dec. 2—American Medical Association (Clinical Meeting), Auditorium Exposition Hall, Miami Beach, Fla. and Americana Hotel, Bal Harbour, Fla.

Dec. 8-10 —Southern Surgical Association, Boca Raton Hotel, Boca Raton, Fla.

Association of American Physicians and Surgeons

The 21st Annual Meeting of the AAPS will be held October 8-10 at The Roosevelt Hotel in New Orleans, Louisiana. Distinguished speakers will include Jenkin Lloyd Jones, Editor, The Tulsa Tribune, Tulsa, Oklahoma; John A. Laberee, Southern District Manager, Extension Division, E. I. Du Pont De Nemours & Co., Atlanta, Georgia; Milford O. Rouse, M.D., Speaker, AMA House of Delegates, Dallas, Texas; Prof. Ludwig von Mises, Internationally Known Economist, New York City; Edwin P. Neilan, Immediatc Past President, Chamber of Commerce of the U. S., Wilmington, Delaware; and Tom Anderson, President, Farm and Ranch Publications, Nashville, speaker for the annual banquet. Requests for information should be forwarded to the Association, 185 North Wabash Avenue, Chicago.

Pan-Pacific Surgical Association

The Association has announced the dates of the Tenth Congress and the Second Mobile Educational Seminar to countries bordering on the Pacific basin. Part I, the Honolulu portion, will meet at the Princess Kaiulani Hotel in Honolulu, on Sept. 20 to 28; Part II and Part III will depart Hawaii on Sept. 28 and travel to Japan and Hong Kong, with Part II returning to San Francisco, on Oct. 10 in time for the opening of the American College of Surgeons, and Part III continuing on to the Philippines, Thailand, India, Singapore, Australia and New Zealand, returning to Hawaii on Nov. 1. For further information, please write: Pan-Pacific Surgical Association, Room 236, Alexander Young Building, Honolulu, Hawaii 96813.

Conference on the Medical Aspects of Sports

The AMA will conduct its Sixth National Conference on the Medical Aspects of Sports on Sunday, Nov. 29, at Miami Beach, Florida. The meeting will be open to trainers, educators and others interested in sports medicine. For additional information write to: Committee on Medical Aspects of Sports, AMA, 535 North Dearborn Street, Chicago, 60610.

Association of American Medical Colleges

The Association has announced that Smith, Kline & French Foreign Fellowships will be awarded again in 1965 for the sixth successive year. Applications will be accepted from medical students in U. S. Schools for grants which will enable them to broaden their medical knowledge by serving in remote medical stations in underdeveloped areas of Africa, Asia, Latin America, and Oceania, for a period of at least ten weeks. Applications will be processed in early February 1965 and award winners will be announced by March 1. For additional information, write to the Association of American Medical Colleges, 2530 Ridge Avenue, Evanston, Illinois.

OFFICERS OF THE TENNESSEE MEDICAL ASSOCIATION, 1964-65

President—R. H. Kampmeier, M.D., B-4211, Vanderbilt Hospital, Nashville
President-Elect—John H. Burkhart, M.D., 3000 North Broadway, Knoxville
Vice-President—George K. Henshall, M.D., Medical Arts Building, Chattanooga
Vice-President—Robert M. Finks, M.D., 2122 West End Avenue, Nashville
Vice-President—Lamb B. Myhr, M.D., Jackson Clinic, Jackson
Secretary—Charles A. Trahern, M.D., 1724 Memorial Drive, Clarksville
Excutive Director—Mr. J. E. Ballentine, 112 Louise Avenue, Nashville 37203

BOARD OF TRUSTEES

*John H. Burkhart, M.D., Chairman, (1967) 3000 No. Broadway, Knoxville
*John C. Burch, M.D., Vice Chairman and Treas., (1967) 2112 West End Ave., Nashville
*J. Malcolm Aste, M.D., (1965) 188 South Bellevue, Memphis
Bland W. Cannon, M.D., (1965) 402-B, 20 South Dudley Street, Memphis
*E. L. Caudill, Jr., M.D., (1966) 114 East H Street, Elizabethton
C. D. Hawkes, M.D., (1966) 220 South Claybrook Street, Memphis
G. Baker Hubbard, M.D., (1966) Jackson Clinic, Jackson
Joseph W. Johnson, Jr., M.D., (1965) Interstate Building, Chattanooga
*R. H. Kampmeier, M.D., (1966) Vanderbilt Hospital, Nashville
K. M. Kressenberg, M.D., (1966) 215 Cedar Lane, Pulaski
Chares A. Trahern, M.D., (1965)) 1724 Memorial Drive, Clarksville
(*Executive Committee of the Board of Trustees)

SPEAKER OF THE HOUSE

J. Malcolm Aste, M.D., 188 South Bellevue, Memphis
Vice-Speaker—Tom E. Nesbitt, M.D., 1921 Hayes Street, Nashville

COUNCILORS

First District—J. J. Range, M.D., Memorial Hospital, Johnson City (1965)
Second District—B. M. Overholt, M.D., 717 Cumberland Ave., S.W., Knoxville (1965)
Third District—M. F. Langston, M.D., 103 Palisades, Signal Mountain (1966)
Fourth District—Kenneth L. Haile, M.D., 137 W. Second Street, Cookeville (1965)
Fifth District—John Derryberry, M.D., 844 Union St., Shelbyville (1966)
Sixth District—Harry T. Moore, Jr., M.D., 326 Mid-State Medical Center, Nashville (1965)
Seventh District—Carl C. Gardner, Jr., M.D., 151 Hatcher Lane, Columbia (1966)
Eighth District—O. M. McCallum, M.D., Henderson (1965)
Ninth District—Byron O. Garner, M.D., Hillcrest Dr., Union City (1966)
Tenth District—Francis H. Cole, M.D., Chairman, 188 South Bellevue Boulevard, Memphis (1965)

DELEGATES TO THE AMA

Alvin J. Ingram, M.D., 869 Madison Avenue, Memphis (1965)
Chas. C. Smeltzer, M.D., 521 W. Cumberland Avenue, Knoxville (1966)
Daugh W. Smith, M.D., 1926 Hayes Street, Nashville (1965)
Alternates:
Julian K. Welch, Jr., M.D., Brownsville (1965)
Wm. J. Sheridan, M.D., Medical Arts Building, Chattanooga (1966)
W. O. Vaughan, M.D., 2103 Hayes Street, Nashville (1965)

PRESIDENTS AND SECRETARIES OF COUNTY MEDICAL SOCIETIES, 1964-65

COUNTY	PRESIDENTS	SECRETARIES
Bedford County	Henry Feldhaus, Jr., M.D., 484 Union St., Shelbyville	A. T. Richards, M.D., 208 Madison, Shelbyville
Benton-Humphreys County	Arthur W. Walker, M.D., Waverly	Hiram C. Capps, M.D., Waverly
Blount County	H. T. Vandergriff, M.D., Med. Arts Bldg., Maryville	O. L. Simpson, M.D., Center Bldg., Maryville
Bradley County	Jas. C. Lowe, M.D., 755 Broad St., N. W., Cleveland	James L. Allen, M.D., 420 Central Ave., N. W., Cleveland
Campbell County	James D. Crutchfield, M.D., 100 E. Ave., Lafollette	Roscoe C. Pryse, M.D., Lafollette
Chattanooga-Hamilton County	Edward T. Newell, Jr., M.D., 707 Walnut St., Chattanooga	C. Robert Clark, M.D., 210 Med. Arts Building, Chattanooga Mrs. Flo Richardson, 109 Med. Arts Bldg., Chattanooga—Executive Secy.
Cocke County	Glen C. Shults, M.D., 501 E. Main St., Newport	R. B. McMahan, M.D., 501 E. Main St., Newport
Coffee County	Ralph Brickell, M.D., 601 N. Atlantic St., Tullahoma	Earl Roles, M.D., Tullahoma
Consolidated Medical Assembly of West Tennessee	Lee Rush, M.D., Somerville	Harold Yarbro, M.D., 700 W. Forest St., Jackson
Cumberland County	R. G. Cravens, M.D., 311 S. Main St., Crossville	Jas. T. Callis, M.D., Crossville
Nashville Academy of Medicine Davidson County	Addison Scoville, M.D., 2104 West End Ave., Nashville	Carl Gessler, M.D., 2760 Lebanon Rd., Nashville, 37214 Mr. Jack Drury, 112 Louise Avenue, Nashville—Executive Secretary
Dickson County	W. A. Bell, M.D., 222 Church St., Dickson	Mary Baxter Cook, M.D., Charlotte
Fentress County	Guy C. Pinckley, M.D., Jamestown	B. F. Allred, M.D., Jamestown
Franklin County	E. W. Kirby-Smith, M.D., Sewanee	George L. Smith, M.D., Winchester
Giles County	K. M. Kressenberg, M.D., 215 Cedar Lane, Pulaski	W. H. Murrey, M.D., 215 Cedar Lane, Pulaski
Greene County	J. R. McKinney, M.D., Takoma Hos., Greeneville	John Lay, M.D., 222 N. Main St., Greeneville
Hamblen County	Luke Nabers, M.D., Morristown	E. Richard Baker, M.D., White Pine
Hawkins County	C. C. Johnson, M.D., 50 N. Church St., Rogersville	W. A. Phillips, M.D., Citizens Union Bank Bldg., Rogersville
Henry County	Richard G. Fish, M.D., Commercial Bank, Bldg., Paris	J. D. Mobley, M.D., E. Wood Clinic, Paris
Hickman-Perry County	Sam O. Jones, M.D., Centerville	Parker D. Elrod, M.D., Centerville
Jackson County	E. M. Dudney, M.D., Gainesboro	J. S. Johnson, M.D., Gainesboro
Knoxville Academy of Medicine	John H. Burkhart, M.D., 3000 Broadway, N. E., Knoxville	Ray J. Leffler, M.D., East Tenn. Baptist Hospital, Knoxville
Lawrence County	W. O. Crowder, Jr., M.D., 233 E. Gaines St., Lawrenceburg	James C. Hudgins, M.D., 200 S. Military, Lawrenceburg
Lincoln County	C. Doyne Toone, M.D., South Elk Avenue, Fayetteville	Anne U. Bolner, M.D., Lincoln County Health Dept., Fayetteville
Macon County	Jack C. Clark, M.D., Lafayette	C. C. Chitwood, Jr., M.D., Lafayette
Marshall County	W. S. Poarch, M.D., Lewisburg	H. C. Harris, M.D., Church St., Lewisburg
Maury County	Leon Ward, M.D., 400 W. 7th St., Columbia	Lawrence Nickell, M.D., Maury County Hospital, Columbia
McMinn County	R. Danny Hays, M.D., 7 Grove, N. W., Athens	Robert G. Hewgley, M.D., Med. Arts Bldg., Box 352, Athens
Memphis-Shelby County	William T. Satterfield, Sr., M.D., 1188 Minna, Memphis, 38104	J. Warren Kyle, M.D., 1079 Madison Ave., Memphis, 38104 Mr. Les Adams, 774 Adams Avenue, Memphis—Executive Secretary
Monroe County	Joe K. Wallace, M.D., Sweetwater	Joe Henshaw, M.D., 404 N. High St., Sweetwater
Montgomery County	Howard R. Kennedy, M.D., 419 Franklin St., Clarksville	Frank J. Malone, Jr., M.D., 408 Franklin St., Clarksville
Northwest Tennessee Academy of Medicine	J. H. Ragsdale, M.D., Ripley	Art Murphy, M.D., Trimble
Overton County	W. G. Quarles, M.D., Livingston	Jack M. Roe, M.D., Livingston
Putnam County	Claude M. Williams, M.D., General Hospital, Cookeville	Thurman Shipley, M.D., 135 W. 2nd St., Cookeville
Roane-Anderson County	Albert J. Ahler, M.D., 202 Carter St., Harriman	Robert DePersio, M.D., Med. Arts Bldg., Oak Ridge
Robertson County	Warren G. Hayes, M.D., Bell Bldg., Springfield	Sue C. Atwood, M.D., 500 Main, Springfield
Rutherford County	Lois Kennedy, M.D., 104 S. Spring St., Murfreesboro	Radford Smith, M.D., 420 N. University St., Murfreesboro
Scott County	Maxwell Huff, M.D., Oneida	Roy L. McDonald, M.D., Oneida
Sevier County	Charles L. Roach, M.D., Sevierville	Charles E. Waldrup, M.D., Gatlinburg
Smith County	Thayer S. Wilson, M.D., Carthage	David G. Petty, M.D., Carthage
Sullivan-Johnson County	F. G. McConnell, M.D., 142 Cherokee St., Kingsport	Robert E. Keith, M.D., Med. Dept., Tenn. Eastman Co., Kingsport
Sumner County	W. Gordon Doss, M.D., Hendersonville	Kermit E. Jones, M.D., Westmoreland
Tipton County	Travis L. Bolton, M.D., 728 E. Sherrod, Covington	Warren A. Alexander, M.D., W. Pleasant Avenue, Covington
Warren County	J. E. Puckett, M.D., 203 West Main St., McMinnville	J. C. Gaw, M.D., 315 N. Spring St., McMinnville
Washington-Carter-Unicoi County	Dillard M. Sholes, Jr., M.D., 203 N. Sycamore St., Elizabethton	Gilbert A. Rannick, M.D., 107 W. Fairview Ave., Johnson City
Weakley County	Edward Welles, Jr., M.D., Dresden	M. K. Bottorff, M.D., Martin
White County	Donald H. Bradley, M.D., Sparta	Charles A. Mitchell, M.D., Sparta
Williamson County	Joel Lee, M.D., Franklin	H. P. Hoover, M.D., Franklin
Wilson County	Joe Frank Bryant, M.D., McFarland Hospital—Lebanon	T. R. Puryear, M.D., 239 E. Main, Lebanon



The Doctor's Visit, Jan Steen 1626-1679, Mauritshuis, The Hague

In Diverticulosis and Diverticulitis...

METAMUCIL® brand of psyllium hydrophilic mucilloid

"Diverticulosis ...a low-roughage diet is advisable.... Constipation is avoided, preferably by the daily use of Metamucil.

"Diverticulitis Mild, chronic symptoms of diverticulitis, such as diarrhea or flatulence also are treated[1] by low-roughage diet, adequate fluid intake and Metamucil...."

Usual Adult Dosage: One rounded teaspoonful of Metamucil (or one packet of Instant Mix Metamucil) in a glass of cool liquid one to three times daily.

Metamucil is available as Metamucil powder in containers of 4, 8 and 16 ounces and as flavored Instant Mix Metamucil in cartons containing 16 and 30 single-dose packets.

1. Welch, C. E., Diverticula of the Alimentary Tract, in Conn, H. (editor): Current Therapy—1961, Philadelphia, W. B. Saunders Company, 1961, pp. 224-225.

SEARLE

Research in the Service of Medicine



Outwardly calm...but what goes on inside?

Appearances on the outside do not necessarily suggest what goes on inside. This is particularly true of the ulcer patient, who may appear jolly and unruffled to his neighbors, but presents to you the classic symptoms: organic and functional disorders of the G.I. tract, associated with anxiety and tension.

Consider, when you see him next, the value of PATHILON® SEQUELS® with Phenobarbital, which provides sustained anticholinergic protection from spasm and pain in the target areas, as well as sustained phenobarbital action against triggering anxiety. The controlled release of the active ingredients in the SEQUELS® formulation means protective medication day and night.

Effective in peptic ulcer, intestinal colic, ileitis, esophageal spasm, spastic colon, alcohol-induced G.I. upsets, gastric hypermotility and anxiety neurosis with G.I. symptoms. Should be used as adjunct to other measures.

Side Effects (due to tridihexethyl chloride): dry mouth, blurring of vision, constipation.

Contraindications: urinary bladder neck obstruction; glaucoma; obstructive congenital anomalies of the gastrointestinal tract; pyloric obstruction; congenital megacolon; and stenosing gastric or duodenal ulcer with significant gastric retention.

Also available, without phenobarbital, as PATHILON® Tridihexethyl chloride SEQUELS® 75 mg.

Pathilon® Sequels® with Phenobarbital Sustained Release Capsules

Each capsule contains: Tridihexethyl chloride, 75 mg., and phenobarbital, 45 mg.

LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, New York

Lederle

279-4



Of 1,028 patients with confirmed respiratory infections... 954 or 92.8% were treated successfully with Signemycin®

Note:
Hammerl* selected his patients for treatment with Signemycin on the basis of demonstrated bacteriological resistance to other antibiotics or failure of previous therapy. Of 100 patients with various respiratory tract infections, 95 responded to Signemycin. Pathogens isolated included staphylococci and *Diplococcus pneumoniae*.

*Hammerl, H.: Wien. Med. Wschr. 108:629, July 26, 1958.

Condition	No. of Patients	No. Cured with Signemycin
Abscess, pulmonary	17	16
Bronchiectasis	19	13
Bronchitis	286	267
Bronchopneumonia	192	179
Empyema	12	11
Pneumonia, lobar	150	146
Pneumonia, other febrile	160	150
Various infected pneumopathies	192	172
Totals	1,028	954 (92.8%)

consistently effective...often when others fail

Signemycin®

tetracycline HCl, 167 mg.; oleandomycin as triacetyloleandomycin, 83 mg. capsules (250 mg.)

Also available as Syrup, Pediatric Drops, and half-strength Capsules

Brief Summary and Bibliography follow.

Science for the world's well-being® Pfizer *Since 1849*

PFIZER LABORATORIES Division, Chas. Pfizer & Co., Inc. New York, New York 10017

Professional Liability Insurance
(MALPRACTICE)
Policy and Rates Approved
by the
TENNESSEE MEDICAL ASSOCIATION



Standard Coverage That SAVES YOU 35%

Class 1—Physicians doing no surgery

Class 2—Physicians doing minor surgery or assisting in major surgery on own patients

Class 3—Surgeons - General Practitioners who perform major surgery or assist in major surgery on other than their own patients and specialists: Anesthesiologists, Cardiologists (including catheterizations, but not including surgery), Ophthalmologists and Proctologists

Class 4—Surgeons - Specialists

Limits	Class 1	Class 2	Class 3	Class 4
5/15	$ 37.05	$ 46.15	$ 89.05	$133.25
10/30	50.02	62.30	120.22	179.89
25/75	63.36	78.92	152.28	227.86
50/150	70.02	87.22	168.30	251.84
75/225	74.10	92.30	178.10	266.50
100/300	76.32	95.07	183.44	274.50
200/300	79.66	99.22	191.46	286.49
300/300	81.88	101.99	196.80	294.48
200/500	88.77	108.61	202.13	298.49
500/500	93.59	114.61	213.71	315.81
500/1 million	114.70	135.99	236.37	339.81
1 million/1 million	120.25	142.91	249.73	359.79

1. Partnership liability, increase premium for each partner by 20%.
2. X-Ray Therapy and Shock Therapy quotations made on request.
3. Premises Liability (bodily injury, property damage and medical payments) Minimum premium $8.00.

FARRINGER & CO.
Phone 524-7335
Knoxville, Tennessee

FARRINGER & CO.
Phone 276-7331
Memphis, Tennessee

FAW & SHERROD
Phone 926-8164
Johnson City, Tennessee

INGLE-KNOX INSURANCE AGENCY
Phone 265-4541
Chattanooga, Tennessee

LIPSCOMB & PITTS CO.
Phone 272-2515
Memphis, Tennessee

Your policy backed by Assets over **$42,000,000.00**

Shelby Mutual Insurance Company
of Shelby, Ohio

*20% off on Hospital—Professional Liability

For Information on Hospital-Professional Liability and other coverages, please contact one of the agents listed.



Of 507 patients with confirmed ear, nose and throat infections... 465 or 91.7% were treated successfully with Signemycin®

Note:
Adams,* whose 50 patients included 20 with ENT infections, stated that Signemycin "was particularly valuable in infections that did not respond to other antimicrobial agents, and in patients to whom penicillin could not be given." All his cases responded within five days; in most patients, all signs of infection disappeared in three days.

*Adams, J.: J. Tenn. Med. Ass. 50:446, Nov., 1957.

Condition	No. of Patients	No. Cured with Signemycin
Otitis media	90	86
Pharyngitis and laryngitis	162	148
Sinusitis	68	55
Tonsillitis and peritonsillitis	163	153
Various	24	23
Totals	507	465 (91.7%)

consistently effective...often when others fail

Signemycin®

tetracycline HCl, 167 mg.; oleandomycin as triacetyloleandomycin, 83 mg. capsules (250 mg.)

Also available as Syrup, Pediatric Drops, and half-strength Capsules

Brief Summary and Bibliography follow.

Science for the world's well-being® Pfizer *Since 1849*

PFIZER LABORATORIES Division, Chas. Pfizer & Co., Inc. New York, New York 10017

REFER EYE PATIENTS
TO AN
EYE PHYSICIAN

By so doing, you will be assured of a complete diagnosis of your patients' eyes.

Guild Opticians complete the cycle for Professional Service.

GUILD OF PRESCRIPTION OPTICIANS OF AMERICA

BE SAFE—BE SURE

SEE

YOUR GUILD OPTICIAN

FOR

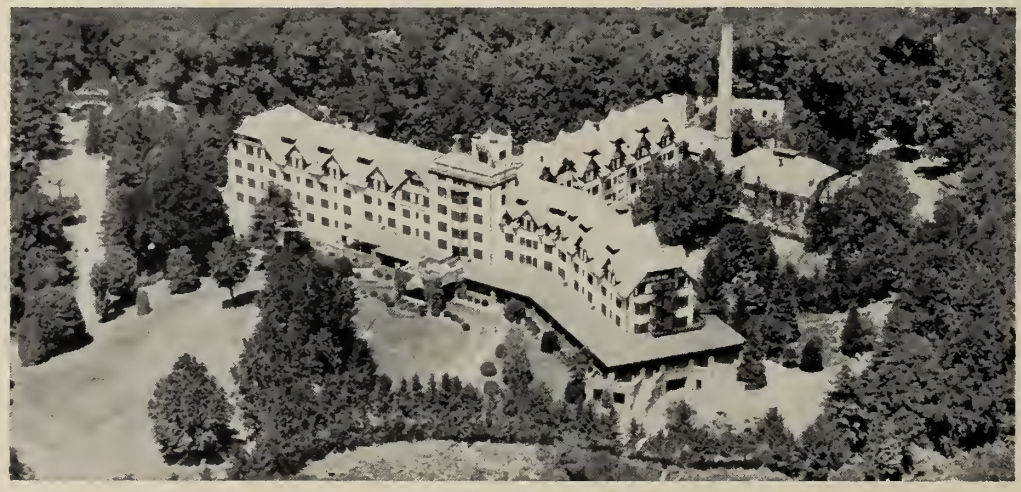
THE BEST SERVICE

EYE PHYSICIANS: Please Note—

Your prescriptions for glasses are "SAFE" when referred to a Guild Optician. Bound by the code of Ethics to uphold the highest standards in optical service.

APPALACHIAN HALL
Established 1916

Asheville North Carolina



An Institution for the diagnosis and treatment of Psychiatric and Neurological illnesses, rest, convalescence, drug and alcohol habituation.
Insulin Coma, Electroshock and Psychotherapy are employed. The Institution is equipped with complete laboratory facilities including electroencephalography and X-ray.
Appalachian Hall is located in Asheville, North Carolina, a resort town, which justly claims an all around climate for health and comfort. There are ample facilities for classification of patients, rooms single or en suite.

WM. RAY GRIFFIN, JR., M.D. MARK A. GRIFFIN, SR., M.D.
ROBERT A. GRIFFIN, M.D. MARK A. GRIFFIN, JR., M.D.

For rates and further information write
Appalachian Hall, Asheville, N. C.



Of 1,021 children with various confirmed infections... 950 or 93.0% were treated successfully with Signemycin®

Note:
The effectiveness of Signemycin was demonstrated by Chattas and his co-workers* who administered Signemycin to 30 children with serious staphylococcal infections resistant to commonly used antibiotics. Only one failed to respond. In each case the use of this drug was indicated by antibiogram. Those children treated with a nonselected antibiotic—for comparative purposes—took three times longer to recover.

Chattas, A et al.: Antibiot. Med. 7:300, May, 1960.

Condition	No. of Patients	No. Cured with Signemycin
Eye, ear, nose, throat infections	368	343
Respiratory infections	369	346
Gastrointestinal infections	42	30
Skin and soft-tissue infections	38	37
Deep-seated or generalized infections	47	44
Various conditions	157	150
Totals	1,021	950 (93.0%)

consistently effective...often when others fail

Signemycin®

tetracycline HCl, 167 mg.; oleandomycin as triacetyloleandomycin, 83 mg. capsules (250 mg.)

Signemycin is also available as half-strength Capsules, preconstituted raspberry-flavored Syrup and Pediatric Drops

Brief Summary and Bibliography follow.

Science for the world's well-being® Pfizer *Since 1849*

PFIZER LABORATORIES Division, Chas. Pfizer & Co., Inc. New York, New York 10017

Signemycin® Bibliography
1. Adams, J.: J. Tenn. Med. Ass. 50:446, Nov., 1957. **2.** Arachi, N. and Gheradi, F.: Quad. Urol. 9:156, Apr.-June, 1959. **3.** Arneil, G. C.: Antibiot. Ann. 1958-1959:327. **4.** Arrigoni, G. et al.: Minerva Med. 48:2701, Aug. 25, 1957. **5.** Baur, A.: Aerztl. Prax. 11:1845, Dec. 5, 1959. **6.** Bellomio, S. et al.: Riv. Ital. Tracoma, vol. 10, Nos. 1-2, Jan.-June, 1958. **7.** Bellomio, S. et al.: Riv. Ital. Tracoma, vol. 11, No. 1, Jan.-Mar., 1959. 8. Belonoschkin, B. and Lindgren, M.: Svensk. Lakartidn. 56:2134, July 31, 1959. **9.** Bergdahl, U.: Svensk. Lakartidn. 55:1715, June 6, 1958. **10.** Bhattacharyya, M. N. and Bhuyan, J. N.: Antiseptic 56:611, Aug., 1959. **11.** Blass, R.: Schweiz. Med. Wschr. 89:158, Feb. 7, 1959. **12.** Bolognesi, C.: Minerva Med. 48:2695, Aug. 25, 1957. **13.** Candela, R. B.: Med. Esp. 46:273, Oct., 1961. **14.** Cappelli, E.: Minerva Med. 48:2690, Aug. 25, 1957. **15.** Carter, C. H. and Maley, M. C.: Antibiot. Ann. 1956-1957:51. **16.** Caruselli, M. and Musca, A.: Minerva Med. 51:3516, Oct. 17, 1960. **17.** Ceitlin, J.: Med. Panamer. 15:72, Aug. 1, 1960. **18.** Chattas, A. et al.: Antibiot. Med. 7:300, May, 1960. 19. Chiarenza, A.: Minerva Med. 48:2692, Aug. 25, 1957. **20.** Cooper, J. et al.: Antibiot. Med. 5:302, May, 1958. **21.** Cupples, J. F. B. and Perry, A. W.: Canad. Med. Ass. J. 77:699, Oct. 1, 1957. **22.** David, N. A. and Carter, P. B.: Rocky Mountain Med. J. 58:27, Mar., 1961. **23.** Davis, W. G.: Clin. Rev. 1:21, Apr., 1958. **24.** de Lellis, J.: Dia Med., Apr. 24, 1958, p. 824. **25.** Dienz, H.: Aerztl. Prax. 13:1797, 1961. **26.** Dietel, V. and Meissner, F.: Deutsch. Gesundh. 16:2470, Dec. 28, 1961. **27.** Dryjski, J.: Pol. Tyg. Lek. 24:1113, June 24, 1959. **28.** Durrieu, C. A. et al.: Antibiot. Ann. 1958-1959:297. **29.** Faz Tabio, H.: Rev. Cuba. Pediat. 30:219, Apr., 1958. **30.** Febles Alonzo, D. and Batthyany, C.: Actas Ginecotocol. (Uruguay) 13:4, Aug., 1959. **31.** Febles Alonzo, D. and Biderman, I.: Antibiot. Ann. 1958-1959:270. **32.** Fiora, F. and Compa, F.: Dia Med., Apr 3, 1958, p. 570. **33.** Garre, E.: Antibiot. Med. 7:285, May, 1960. **34.** Geiger, K.: Praxis 15:365, Apr. 9, 1959. **35.** Gemma, G. B. et al.: Minerva Med. 48:2643, Aug. 25, 1957. **36.** Gerner, G.: Arzneimittelforschung 9:484, Aug., 1959. **37.** Grazia, G.: Clin. Pediat. (Bologna) 41:1005, Nov., 1959. **38.** Greco, O.: Med. Condotto-Med. Prat. 9:497, 1958. **39.** Hammerl, H.: Wien. Med. Wschr. 108:629, July 26, 1958. **40.** Henne, H. F.: Med. Klin., No. 29, July 18, 1958, p. 1267. **41.** Heredia Diaz, J. et al.: Medicina (Mex.) 38:308, July 10, 1958. **42.** Herrera, W. A.: Dia Med. 30:3116, Dec. 8, 1958. **43.** Hoffmann, H.: Medizinische (Stuttgart) 45:1830, Nov. 8, 1958. **44.** Kelleher, D.: Practitioner 182:227, Feb., 1959. **45.** Kleine, W. and Hagen, H.: Ther. Gegenw. 98:171, Apr., 1959. **46.** Klovstad, O.: T. Norsk. Laegeforen. 77:681, Aug. 15, 1957. **47.** Kobari, K. and Tajiri, I.: Naika No Ryoiki (Field of Internal Medicine) 7:245, May, 1959. **48.** Kohler, H. F.: Clin. Rev. 1:16, Apr., 1958. **49.** Kraljevic, R. et al.: Antibiot. Med. 5:364, June, 1958. **50.** La Caille, R. A. and Prigot, A.: Antibiot. Ann. 1956-1957:67. **51.** Lapeyre, L. et al.: Marseille Med. 99:953, 1962. **52.** Levi, W. M., Jr. and Kredel, F. E.: J. S. Carolina Med. Ass. 53:178, May, 1957. **53.** Loughlin, E. H. et al.: Antibiot. Ann. 1958-1959:293. **54.** Loughlin, E. H. et al.: Antibiot. Med. 7:739, Dec., 1960. **55.** Mathur, S. N. and Joshi, V. S.: J. Indian Med. Ass. 34:437, June 1, 1960. **56.** Moggian, G.: Minerva Med. 48:2648, Aug. 25, 1957. **57.** Molinelli, E. A. et al.: Antibiot. Ann. 1957-1958:692. **58.** Montilli, G. and Avellino, M.: Dermatologica (Basel) 9:2, 1958. **59.** Morador, J. L. et al.: Antibiot. Ann. 1959-1960:716. **60.** Morador, J. L. and Saldana Tate, L.: An. Ateneo, Clin. Quirur. 1:52, Jan., 1958. **61.** Morel, A. S.: Clin. Rev. 1:18, July, 1958. **62.** Morey, G. S. et al.: Rev. Hosp. Nino (Lima) 18:293, 1957. **63.** Ottolenghi, C. E. et al.: Bol. Soc. Cir. B. Air. 41:739, Nov. 6, 1957. **64.** Pagola, J. G. et al.: Antibiot. Ann. 1958-1959:287. **65.** Pavone, M. et al.: Minerva Urol. 70:121, Sept.-Oct., 1958. **66.** Porrazzo, F.: Gazz. Med. Ital. 118:550, Dec., 1959. **67.** Prats, F. and de la Parra, M. A.: Antibiot. Ann. 1959-1960:484. 68. Prokop, O.: Prakt. Arzt. 12:145, Feb. 15, 1958. **69.** Ramirez Boettner, C. M. et al.: Rev. Med. Paraguay 5:269, July-Sept., 1960. **70.** Randig, K.: Deutsch. Med. J. 8:447, Aug. 15, 1957. **71.** Saavedra Amaro, S. and Lopez Zepeda, L.: Medicina (Mex.) 38:396, Aug. 25, 1958. **72.** Saldana Sotomayor, F.: Medicina (Mex.) 39:191, May 10, 1959. **73.** Santos, A.: Rev. Brasil. Med. 16:463, July, 1959. **74.** Schenone, H.: Antibiot. Ann. 1958-1959:316. **75.** Schunk, A.: Int. Rec. Med. 173:143, Mar., 1960. **76.** Sgarzini, L. and Amato, R.: Ann. Stomat. 7:499, July, 1958. **77.** Shubin, H.: Antibiot. Med. 4:174, Mar., 1957. **78.** Sundberg, R. H.: Antibiot. Med. 7:115, Feb., 1960. **79.** Talbot, J. R.: Wisconsin Med. J. 57:237, June, 1958. **80.** Tato, J. M. et al.: Antibiot. Ann. 1957-1958:675. **81.** Weithofer, W.: Medizinische (Stuttgart) No. 33-34:1490, Aug. 22, 1959. **82.** Willcox, R. R. and Rosedale, N.: Brit. J. Vener. Dis. 38:19, Mar., 1962. **83.** Willemot, J. P. et al.: Bruxelles Med. 38:1026, June 22, 1958. **84.** Winton, S. S. and Chesrow, E. J.: Antibiot. Ann. 1956-1957:55. **85.** Wolman, B.: Practitioner 185:199, Aug., 1960. **86.** Yodh, B. B.: J. J. J. Group Hosp. 5:183, July, 1960. **87.** Zaldivar, C. G. and Falcone, F. L.: Rev. Hosp. Nino (Lima) 20:141, June, 1958.

SIGNEMYCIN®

Side Effects: Glossitis and allergic reactions, as well as severe anaphylactoid reactions, have been reported as rare side effects. Should significant reaction or idiosyncrasy occur, discontinue medication and institute countermeasures. Use of tetracycline during the last trimester of pregnancy, neonatal period and early childhood may cause discoloration of developing teeth. Reduce usual oral dosage and consider serum level determinations in patients with impaired renal function to prevent possible liver toxicity due to excessive accumulation of antibiotic in the serum.

Precautions: Overgrowth of nonsusceptible organisms may occur. In such cases, discontinue medication and institute appropriate specific therapy as indicated by susceptibility testing. Aluminum hydroxide gel given with antibiotics has been shown to decrease their absorption and is contraindicated. The coloring agents used in Signemycin Syrup and Pediatric Drops may produce red discoloration of stools.

Triacetyloleandomycin, a constituent of Signemycin, administered to adults in daily oral doses of 1.0 Gm. (3 Gm. Signemycin) for periods of more than ten days may produce hepatic dysfunction and jaundice. In the rare patient who requires this high dosage level of Signemycin initially, liver function should be carefully followed and dosage should be reduced, as promptly as possible, to the usual recommended range of 1.0 to 2.0 Gm. per day. Therefore, Signemycin is recommended primarily for the treatment of acute or severe infections, with treatment restricted to a ten-day period. If clinical judgment dictates continuation of therapy beyond ten days, serial monitoring of the liver profile should be carried out, including BSP, transaminase, and cephalin flocculation tests. Changes observed in liver function were reversible following discontinuation of the drug.

Formulas: Capsules: 250 mg. Signemycin (167 mg. tetracycline HCl and 83 mg. oleandomycin as triacetyloleandomycin).

Capsules: 125 mg. Signemycin (83 mg. tetracycline HCl and 42 mg. oleandomycin as triacetyloleandomycin).

Syrup: 125 mg. Signemycin (tetracycline equivalent to 83 mg. tetracycline HCl and 42 mg. oleandomycin as triacetyloleandomycin) per 5 cc.

Pediatric Drops: 100 mg. Signemycin (tetracycline equivalent to 67 mg. tetracycline HCl and 33 mg. oleandomycin as triacetyloleandomycin) per cc.

More detailed professional information available on request.

Science for the world's well-being® Pfizer *Since 1849*

PFIZER LABORATORIES Division, Chas. Pfizer & Co., Inc. New York, New York 10017



Of 5,057 patients with confirmed infections of all body systems... 4,731 or 93.5% were treated successfully with Signemycin®

Note:

The high rate of response to Signemycin in these cases is noteworthy because the totals include many patients with difficult-to-treat infections, many whose infections had proved resistant to other agents, and many who had been treatment failures on other therapy.[1-87] In addition the following criteria were used for the cases cited: (1) only published results were used (2) results were confirmed by clinical and/or laboratory findings (3) patients were cured, not "improved" (4) dosage conformed with current recommendations in the United States (5) no other anti-infective agents were used concomitantly (6) no instance of prophylactic use was included in these tabulations.

Condition	No. of Patients	No. Cured with Signemycin
Ear, nose and throat infections	507	465
Respiratory infections	1,028	954
Gastrointestinal infections	425	387
Genitourinary infections	748	684
Skin and soft-tissue infections	1,088	1,036
Bone and joint infections	71	64
Deep-seated or generalized infections	257	251
Obstetrical & gynecological infections	341	320
Miscellaneous conditions	592	570
Totals	5,057	4,731 (93.5%)

consistently effective...often when others fail

Signemycin®

tetracycline HCl, 167 mg.; oleandomycin as triacetyloleandomycin, 83 mg. capsules (250 mg.)

Also available as Syrup, Pediatric Drops, and half-strength Capsules

Science for the world's well-being® Pfizer *Since 1849*

PFIZER LABORATORIES Division, Chas. Pfizer & Co., Inc. New York, New York 10017

SAINT ALBANS

PSYCHIATRIC HOSPITAL

(A Non-Profit Organization)

Radford, Virginia

Telephone: 639-2482

STAFF

James P. King, M.D., Director

William D. Keck, M.D.
Clinical Director
James K. Morrow, M.D.
Silas R. Beatty, M.D.

Edward W. Gamble, III, M.D.
Morgan E. Scott, M.D.
J. William Giesen, M.D.
Internist (Consultant)

Clinical Psychology
Thomas C. Camp, Ph.D.
Artie L. Sturgeon, Ph.D.

Don Phillips
Administrator

AFFILIATED CLINICS

Bluefield Mental Health Center
525 Bland St., Bluefield, W. Va.
David M. Wayne, M.D.
Phone: 325-9159

Beckley Mental Health Center
109 E. Main Street, Beckley, W. Va.
W. E. Wilkinson, M.D.
Phone: 253-8397

Charleston Mental Health Center
1119 Virginia St., E., Charleston, W. Va.
Malcolm G. MacAulay, M.D.
Phone: 344-3578

Norton Mental Health Clinic
Norton Community Hospital, Norton, Va.
Pierce D. Nelson, M.D.
Phone: 1090



YOU:

HISTORY: 20 years of study, plus internship/residency. Substantial investment in professional location, equipment. **SIGNS and SYMPTOMS:** Reports that large home, growing family and minimal professional standard of living are a concern. Still ahead—college costs, retirement, natural estate ambitions. **PROGNOSIS:** Needs 15-20 peak years of income to pay off education, home; rear family; retire. All this while battling tough taxes, and without the benefit of social security or company paid life and disability insurance, pension plan. **TREATMENT:** Learn about Mutual Benefit Life's "Seven Significant Benefits". Talk with a M.B.L. representative. See how a built-for-you plan solves specific problems through unique disability clauses, unusually high cash and loan values, liberal survivor income options—and more. Write on your own professional letterhead for exclusive report covering a full range of typical insurance requirements for physicians. Just ask for a copy of *Consultant's Report.*

Those who plan ahead get ahead **MUTUAL BENEFIT LIFE** INSURANCE COMPANY, NEWARK, NEW JERSEY

CARRIER OF YOUR TENNESSEE MEDICAL ASSOCIATION GROUP LIFE INSURANCE PLAN

EDWARD C. DUNN
1104 Sudekum Bldg.
Nashville, Tenn.

SETH W. SIZER
1211 James Bldg.
Chattanooga, Tenn.

THERON M. LEMLY
1309 Poplar Ave.
Memphis, Tenn.



Doctor, you can take it with you!



THE BURDICK EK-III **DUAL-SPEED ELECTROCARDIOGRAPH**

- 26½ pounds light, including all accessories and carrying case! Ideal for office or bedside use
- 25 or 50 mm. speed — an accurate record for an accurate diagnosis
- frequency response greatly in excess of minimum A.M.A. standards
- top-loading paper drive eliminates tedious paper-threading adjustments

Burdick

THE BURDICK CORPORATION

MILTON, WISCONSIN

Branch Offices: New York • Chicago • Atlanta • Los Angeles

Dealers in all principal cities

KAY SURGICAL, INC.

1144 Madison Ave. Memphis, Tenn.

Gyne-Cytology Laboratory, Inc.

M. Wm. Rubenstein, M.D.

(PAPANICOLAOU METHOD)

RAPID SERVICE
Mailing Kits On Request

Suite 422 - 636 Church Street
EVANSTON, ILLINOIS 60201

PATRONIZE

OUR

ADVERTISERS

Wanted: Male Psychiatrist

Opening for a Board Eligible or Board Certified Psychiatrist to Join a well-established group.

Ideal work conditions in a 145-bed active treatment hospital serving several Southeastern states.

Professional freedom. Good living conditions.

Starting salary—$20,000-25,000

For Full Particulars Write Box 300 This Journal

Tennessee Medical Association's

Exclusively Approved

GROUP DISABILITY INCOME PROGRAM

Administered By

Smith, Reed, Thompson & Ellis Co.

1322 Nashville Trust Building
NASHVILLE 3, TENNESSEE
Phone 255-7625

WILLIAM H. ELLIS, C. L. U. MGR.
THOMAS G. HENRY

ASSOCIATES

Alden H. Smith, C. L. U.

Arthur D. Reed, C. L. U.

Joe Thompson, Jr., C. L. U.

Alden H. Smith, Jr., C. L. U.

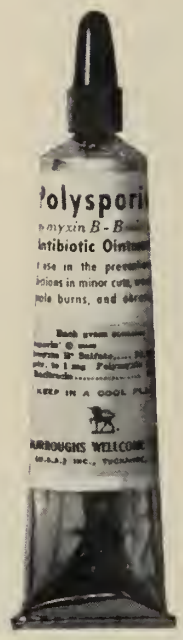
E. Dan Smith, II

Underwritten By

Commercial Insurance Company

Newark, New Jersey

in treating topical infections, no need to sensitize the patient



USE 'POLYSPORIN'® brand POLYMYXIN B-BACITRACIN ANTIBIOTIC OINTMENT

broad-spectrum antibiotic therapy with minimum risk of sensitization

Caution: As with other antibiotic products, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs. **Contraindication:** This product is contraindicated in those individuals who have shown hypersensitivity to any of its components.
Supplied: In ½ oz. and 1 oz. tubes
Complete literature available on request from Professional Services Dept. PML.

BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, N.Y.



A SURGICAL INSTRUMENT OIL

Scientifically Developed for the

MEDICAL PROFESSION

Apply as indicated; a few drops especially in locks and serrations of instruments, or other delicate mechanisms. Leave a thin film over the entire instrument to prevent rust in disuse or storage. This highly refined clear instrument oil will not clog, gum or turn rancid. Non-corrosive.

4-oz. can 75c
Pt. bottle with dispensing can $2.50
Qt. bottle with dispensing can $4.00
Plus post.

White Surgical Supply Co.
SURGICAL SUPPLIES & ACCESSORIES
515 West Church Ave. Knoxville 7, Tennessee
Telephone 3-1186

Today's Health
PUBLISHED BY THE American Medical Association
FOR THE AMERICAN FAMILY

A Good Buy in Public Relations

★ Place it in your reception room

Today's Health is published for the American Family by the American Medical Association, 535 N. Dearborn St.—Chicago 10, Illinois

Give your subscription order to a member of your local Medical Society Woman's Auxiliary, who can give you Special Reduced Rates.

Remember, Doctor—

It's been

Tafel Surgical Supply Co., Inc.

SINCE 1889

for

Drugs, Orthopedic, Surgical

Supplies & Equipment

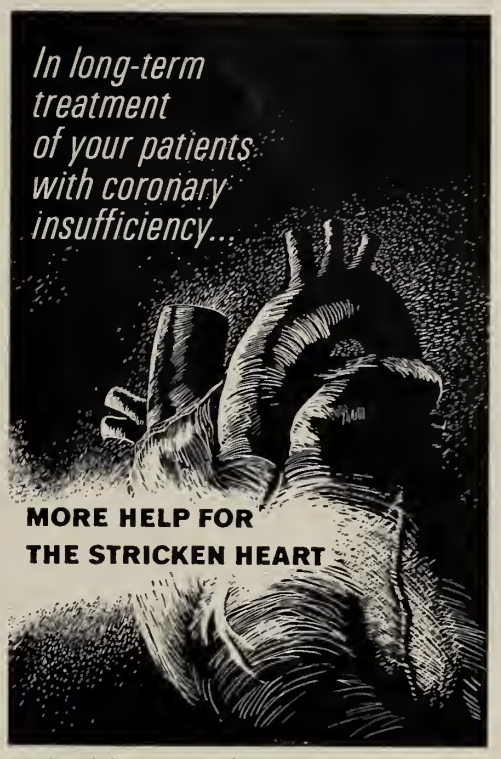
1203 Church Street

Nashville, Tennessee

NEEDED GENERAL PHYSICIAN

Family Internist by four man group in growing rural program in West Virginia. Modern Clinic facilities, regularly visiting specialist consultant staff, scheduled training and vacation periods, foundation sponsorship, no investment required. Starting net income range $14,000-$18,000 depending on qualifications.

For Full Particulars Write Box 700 This Journal



- PETN (pentaerythritol tetranitrate) to increase oxygen supply
- plus meprobamate to decrease anxiety and tension

Unlike phenobarbital, meprobamate is *not* cumulative and does *not* cause depression.

Side effects: Pentaerythritol tetranitrate may infrequently cause nausea and mild headache, usually transient. Slight drowsiness may occur with meprobamate and, rarely, allergic reactions. **Precautions:** Meprobamate may increase effects of excessive alcohol. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction. **Contraindications:** Like all nitrate-containing drugs, 'Miltrate' should be given with caution in glaucoma. *Complete product information available in the product package, and to physicians upon request.* **Dosage:** 1 to 2 tablets, *before meals* and at bedtime. Individualization required. **Supplied:** Bottles of 50 tablets.

CML-1055

MILTRATE®

meprobamate 200 mg. + pentaerythritol tetranitrate 10 mg.

WALLACE LABORATORIES / *Cranbury, N. J.*



Whether you're a teacher correcting exams. A student cramming for them. A housewife cleaning up after the kids. Or a businessman working late at night. Whoever you are, things go better when you pause and refresh with ice-cold Coca-Cola.



Out-Patient Clinic and Offices

HILL CREST SANITARIUM

Established in 1925

FOR NERVOUS AND MENTAL DISEASES
AND ADDICTION PROBLEMS

PLACEMENT SERVICE

The Placement Service of the Tennessee Medical Association is designed to assist doctors and communities. Further information and contacts, to both physicians and communities, is available from the Public Service Office, 112 Louise Avenue, Nashville, Tennessee—telephone 291-4584.

Locations Wanted

GENERAL PRACTITIONER, 43, graduate of the Medical College of Georgia, would like to establish either solo or associate practice in any city or town in Tennessee. Extensive residency training. Now in private practice. Married. Presbyterian. Available immediately. LW-472

◆

ORTHOPEDIC PHYSICIAN, 30, now in residency, would like to establish associate or solo practice in any Middle or East Tennessee area of 15,000 plus. Graduate of the Tulane School of Medicine. Married. Available upon 30 days notice. LW-492

◆

OBSTETRICIAN-GYNECOLOGIST, 38, graduate of the University of Arkansas School of Medicine, would like assistant, associate or clinical practice in Middle or West Tennessee city of 50,000 plus. Married. Protestant. Available July 1965. Now in third year residency. LW-501

◆

GENERAL PRACTITIONER, 26, graduate of the University of Tennessee College of Medicine, would like associate practice in East Tennessee town of 5,000 to 10,000. Married. Methodist. Available January 2, 1965. LW-534

◆

DERMATOLOGIST, 31, graduate of the University of Arkansas, would like assistant or solo practice in Middle or West Tennessee area 35,000 plus. Married. Presbyterian. Now in residency. Available May 1965. LW-535

◆

GENERAL SURGEON, 31, graduate of Emory University School of Medicine, would like associate, clinical or other practice in East or Middle Tennessee area 50,000 plus. Married. Protestant. Four years residency; now in Air Force. Available mid-July 1965. LW-536

◆

SURGEON, Thoracic, 43, graduate of the University of Tennessee College of Medicine, would like associate, clinical or institutional practice in East Tennessee. Any size town or city. Tennessee license. Six years residency. Married. Presbyterian. Now in Air Force. Available January 1, 1966. LW-537

◆

PEDIATRICIAN, 31, graduate of the rniversity of Arkansas, would like to establish associate practice in Middle or West Tennessee area of 50,000 plus. Married. Episcopalian. Now in residency. Available August 1965. LW-538

◆

OBSTETRICIAN-GYNECOLOGIST, 32, graduate of the Louisiana State University, would like to establish associate or clinical practice in East Tennessee area of 50,000 plus. Married. Catholic. Now in military service. Available April 1, 1965. LW-539

INTERNIST, 29, graduate of the University of Florida, would like associate, clinical or group practice in Middle Tennessee area of 10,000 plus. Married. Protestant. Now in residency. Available July 1965. LW-542

Physicians Wanted

ASSOCIATE general practitioner needed in East Tennessee town of over 800, trade area much larger. Hospital located in town. Office space and some equipment available. Good housing. PW-192

◆

GENERAL PRACTITIONER, with experience in OB, needed as associate or assistant, in Middle Tennessee town of 12,000. Will furnish office space, utilities, and telephone. Eighteen bed clinic. Age 30-45. PW-158

◆

INTERNIST needed as assistant in West Tennessee city of 15,000. Well established and equipped office. Age 25-35. Hospital practice required. Area agricultural and industrial. Excellent opportunity. PW-203

◆

INDUSTRIAL PHYSICIAN, 25-40 years of age, needed by large concern in East Tennessee city of 180,000. Office space and equipment provided. Regular office hours. Will assist in obtaining housing if desired. Salary and fringe benefits. Excellent position. PW-206

◆

RADIOLOGIST needed for hospital of 100 beds. Located in Northwest town of 10,000. One years internship and three years residency desired. Lake recreational facilities nearby. Good housing and schools. PW-209

◆

GENERAL PRACTITIONER wanted as replacement in West Tennessee town of over 4,500. Agricultural and industrial. Housing, office space and equipment available. Hospital, 40 beds, located in town. PW-213

◆

INTERNIST, associate, needed in Middle Tennessee town of 34,000 plus. Office space available. 175 bed hospital, well equipped, located in town. Near large air base. Only 40 minutes from large recreational water facilities. Current physicians enjoy congenial association. PW-214

◆

GENERAL PRACTITIONER to associate with same in scientific community of 30,000. Well established practice with office across street from new hospital. Prefer recent graduate. PW-215

◆

ASSOCIATE in general practice with a group in Middle Tennessee is wanted. Excellent clinic and hospital facilities. Starting salary $1,500.00 per month. PW-216

◆

RENTAL SPACE proposed to be built in Middle Tennessee town of 2,400 (trade area much larger). New 35 bed hospital, new schools, good churches. Clinic will be adjacent to hospital. PW-217

A SYMPOSIUM ON INFECTIOUS DISEASES

November 11, 12, 13, 1964

To focus on selected problems in diagnosis, treatment and prevention of infections which may affect all ages within a family:

Enteric Viruses and Gram-negative Bacilli
Respiratory Viruses, Streptococci and Staphylococci
Histoplasma Capsulatum and Atypical Mycobacteria

By the faculty of VANDERBILT UNIVERSITY SCHOOL OF MEDICINE assisted by the following distinguished visitors:

Dr. Dorothy Horstmann—Yale University
Dr. Warren E. Wheeler—University of Kentucky College of Medicine
Dr. George Jackson —University of Illinois College of Medicine
Dr. Floyd Denny —University of North Carolina School of Medicine

For information write:
Director of Continuing Education
B-4211 Vanderbilt University School of Medicine
Nashville, Tennessee 37203

Registration Fee—$60.00

List of Advertisers in This Issue

American Cyanamid Company III, XIV, XV, XXVIII
American Tobacco Co. XVIII
Ames Co., Inc. XLV
Appalachian Hall XXXII
Baker Laboratories, Inc. XIX
Brayten Pharmaceutical Co. XXIII
Burroughs Wellcome & Co. XXII, XL
Coca-Cola XLII
Farringer & Company XXX
First Texas Pharmaceuticals, Inc. XIII
Geigy Chemical Corp. VIII
Glenbrook Labs. XX
Guild Opticans XXXII
Gyne-Cytology Laboratory, Inc. XXXVIII
Hill Crest Sanitarium XLII
Kay Surgical, Inc. XXXVIII
Lilly, Eli and Co. I, XXVI
Mutual Benefit Life Ins. Co. XXXVII
Nashville Surgical Supply Co., Inc. XXIV
Parke-Davis and Company II
Pfizer Laboratories XXIX, XXXI, XXXIII, XXXIV, XXXV
Placement Service XLIII
Robins, A. H. Co. X, XI, XVII
Roche Laboratories XLVI
St. Albans XXXVI
Searle, G. D. & Co. XXVII
Smith, Kline & French Laboratories IX
Smith, Reed, Thompson & Ellis Co. XXXIX
Tafel Surgical Supply Co., Inc. XLI
Today's Health XL
Tennessee Valley Medical Assembly XXV
Wallace Laboratories VI, VII, XII, XVI, XXI, XLI
White Surgical Supply Co. XL
Winthrop Laboratories V



"the same old story, doctor—indigestion"

The patient's complaint is indigestion...especially of intolerance to fried foods...aggravated by stress. You diagnose functional G.I. disturbance and associated stress...as manifested by flatulence, "nervous" indigestion and constipation. Prescribe

DECHOLIN-BB®

(Hydrocholeretic • Antispasmodic • Sedative, AMES)

Each Tablet Contains:

BUTABARBITAL SODIUM.....15 mg (¼ gr)
(Warning: May be habit forming) to ease nervous tension

DEHYDROCHOLIC ACID.....250 mg (3¾ gr)
to produce large volume of watery bile, hydrate the bowel contents and gently stimulate the intestinal mucosa

BELLADONNA EXTRACT.....10 mg (⅙ gr)
to reduce smooth-muscle hypertonus

Average adult dose: 1, or if needed, 2 tablets three times daily. *Precautions:* Observe patients periodically for increased intraocular pressure and barbiturate habituation or addiction. Caution drivers against possible drowsiness. *Side effects:* Dehydrocholic acid may cause transitory diarrhea; belladonna — blurred vision, dry mouth. *Contraindications:* Biliary tract obstruction, acute hepatitis, glaucoma, and prostatic hyperplasia. *Available through your regular supplier:* DECHOLIN-BB, bottles of 100 tablets. 72664

Ames Company, Inc., Elkhart, Indiana. AMES



for
The Age of
Anxiety

In prescribing: Dosage—Adults: Mild to moderate anxiet and tension, 5 or 10 mg t.i.d. or q.i.d.; severe states, 20 c 25 mg t.i.d. or q.i.d. Geriatric patients: 5 mg b.i.d. to q.i.c

Cautions—Occasional side effects, often dose-related, ar drowsiness, ataxia, minor skin rashes, menstrual irregula ities, nausea and constipation. Paradoxical reactions ma occasionally occur in psychiatric patients. Individual mainte nance dosages should be determined. Advise patients agains possibly hazardous procedures until maintenance dosage i established. Though compatible with most drugs, use care i combining with other psychotropics, particularly MAO inhib tors or phenothiazines; warn patients of possible combine effects with alcohol. Observe usual precautions in impaire renal or hepatic function, and in long-term treatment.

Supplied—Capsules, 5 mg, 10 mg and 25 mg, bottles c 50 and 500.

ROCHE

LIBRIUM®
(chlordiazepoxide HCl)

Roche Laboratories, Division of Hoffmann-La Roche Inc
Nutley, N.J. 07110

LIBRARY OF THE RHODE ISLAND MEDICAL SOCIETY

THE JOURNAL OF THE

TENNESSEE MEDICAL ASSOCIATION

TENNESSEE ACADEMY OF GENERAL PRACTICE
16th Annual Scientific Assembly
Gatlinburg Auditorium
November 4-6, 1964

SOUTHERN MEDICAL ASSOCIATION
58th Annual Meeting
Memphis, Tennessee
November 16-19, 1964

OCTOBER, 1964

Volume 57 **Number 10**

le of Contents on Page IV
to Advertisers on Page XLII

AMYTAL TAKES THE EDGE OFF DAYTIME ANXIETY AND TENSION

Amytal is a moderately long-acting barbiturate that takes the edge off daytime anxiety and tension without significant change in mood and attitude. Since Amytal is metabolized in the liver within twenty-eight hours, overlapping of effect is minimized, and renal damage does not constitute an absolute contraindication.

Side-Effects: Idiosyncrasy or allergic reactions to the barbiturates may occur.

Precautions and Contraindications: Amytal should be used with caution in patients with decreased liver function, since a prolongation of effect may occur. Administration in the presence of uncontrolled pain may produce excitement. Warning—May be habit-forming.

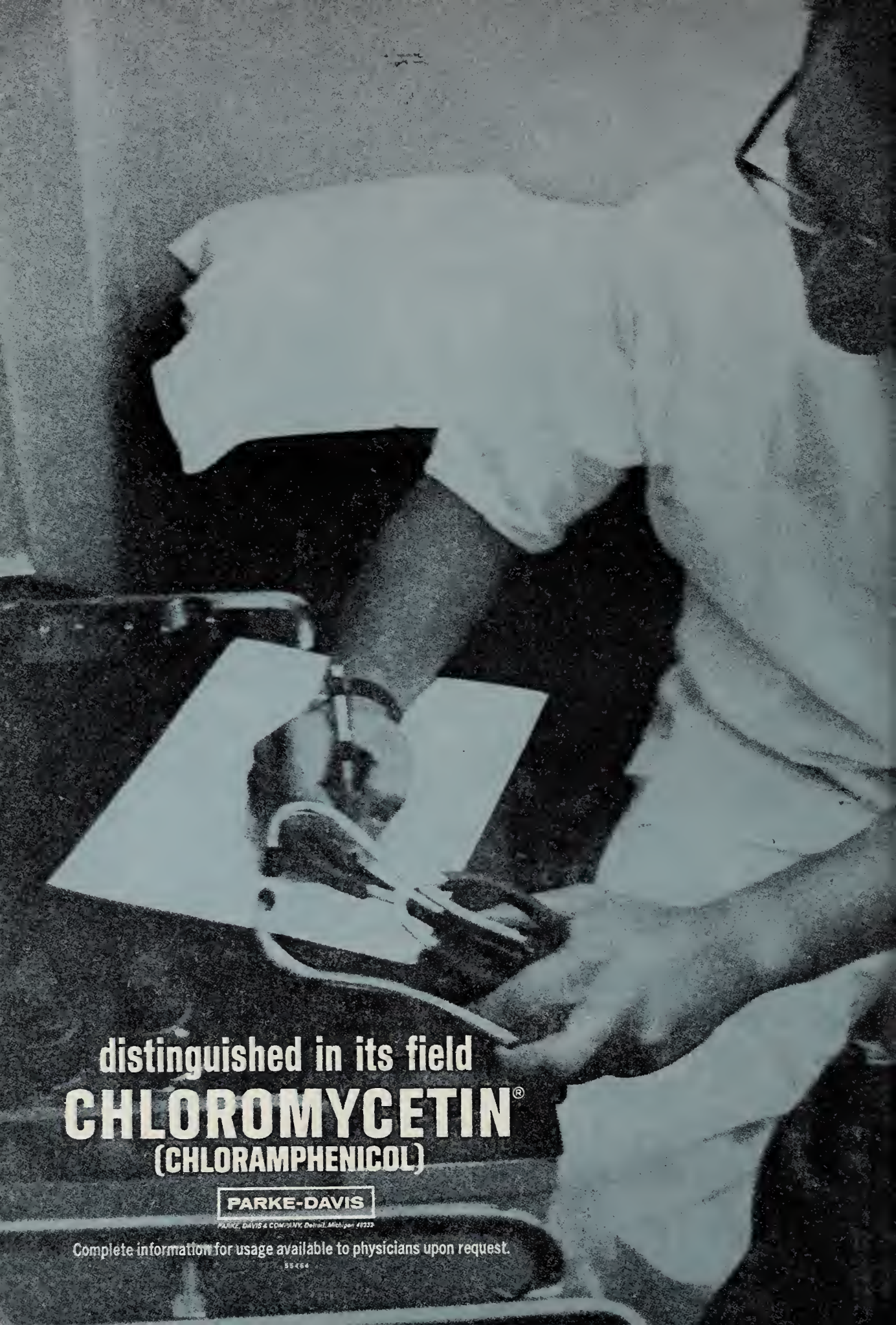
Dosage: Doses should be individualized for each patient. The usual adult sedative dosage ranges from 30 mg. (1/2 grain) to 50 mg. (3/4 grain) two or three times daily.

Additional information available to physicians upon request. Eli Lilly and Company, Indianapolis 6, Indiana.

AMYTAL® AMOBARBITAL

Lilly

401174


distinguished in its field
CHLOROMYCETIN®
(CHLORAMPHENICOL)
PARKE-DAVIS
PARKE, DAVIS & COMPANY, Detroit, Michigan 48232
Complete information for usage available to physicians upon request.
55-164

Just Ready From Saunders!

DOCTOR'S EASACCOUNT RECORD SYSTEM

Saves time and effort in maintaining your financial records

The *Doctor's Easaccount Record System* is a brand new way to ease the burden of your financial record keeping. It enables you or your office assistant to maintain a see-at-a-glance report on income and expenditures, keep a central source of information for income-tax time, and hold the time and expense required for professional audit to a minimum—all with less time and effort. The system is contained in two convenient ledgers; one for disbursements (sufficient for two years' average practice), and one for income (sufficient for one year's average practice). Recording of expenditures is simplified by clearly labelled columns covering: *Salaries—Rent—Drugs and Medical Supplies—Instruments—Utilities—Stationery—Taxes and Insurance—Cost of Auto, Furniture and Equipment*—plus eleven other categories. Columns are provided for house expenses of the physician whose office is in his residence . . . an especially bothersome problem when computing deductible expenses. The Income Volume helps you keep a daily record of: *Date and Time—Patient—Professional Service—Charges—Receipts—Verification of Transfers to Patients' Cards—Bank Deposits*—plus daily, monthly, and yearly totals. These records are expressly set up for the specific requirements of a medical practice. All instructions necessary appear on a single page in the front of each volume.

Two volumes in a flexible cover. *Disbursements Volume*, 96 pages, 10″ x 12″; *Income Volume*, 256 pages, 10″ x 12″. Set—About $9.50. *New—Just Ready!*

Hughes' PEDIATRIC PROCEDURES

Hundreds of hints, helps and shortcuts in methods of child care

Here are clear, step-by-step instructions to help you perform a wide range of technical procedures necessary in the management of children. Augmented by helpful illustrations, the procedures range from *inspection of the ear* to *venous cutdown*. In an uncomplicated, straightforward manner Dr. Hughes tells you: the best sites for venipuncture in infants; the equipment necessary for exchange transfusions; sizes of needles for bone marrow aspiration and biopsy; how to insert a nasogastric tube; hazards and complications of abdominal paracentesis; method of cardiac massage for infants, for small children; for older children; etc. The procedures explained include both routine and special measures: *taking the temperature—measurement of blood pressure—intravenous transfusion—subcutaneous injections—tuberculin skin tests—bone marrow aspiration—lumbar puncture—tracheostomy—percutaneous liver biopsy—enemas—bandaging—nonsuture skin closure—collection of sweat for the diagnosis of cystic fibrosis of the pancreas*. Valuable information is contained on restraining the infant or child—dental health—communicable diseases—methods of reducing pain of injections, etc. This manual will help you ease the stress, strain and trauma involved in performing these procedures on your young patients.

By WALTER T. HUGHES, M.D., Assistant Professor of Pediatrics, University of Louisville School of Medicine, Louisville, Kentucky. About 256 pages, 6⅝″ x 9¾″, with about 127 illustrations. About $8.00. *New—Just Ready!*

Bates & Christie's RESPIRATORY FUNCTION IN DISEASE

Aid in problems ranging from ventilation measurement to respiratory failure

Drs. Bates and Christie brilliantly delineate today's useful knowledge about pulmonary physiology in this timely volume on the lung. The authors begin by reviewing and illuminating the methods available for studying lung function, and outlining the anatomy and values for the normal lung. They point out the advantages and disadvantages of current methods. They clearly describe changes in pulmonary function, as a consequence of age or obesity and in different body positions. What is known about pulmonary adaptation to altitude and to exercise is outlined. The major sections of the book describe individual disease entities of the lung—covering clinical features, radiologic features, and pathology. The authors provide exhaustive explanation of the pathophysiologic effects of each disorder on overall pulmonary function. Special stress is placed on pulmonary emphysema in all its forms, on chronic bronchitis and respiratory failure, on lung diseases caused by physical and chemical agents, and on the secondary effects of heart disease. Detailed case presentations of 54 patients augment the text.

By DAVID V. BATES, M.D., (Cantab.), M.R.C.P. (London), Associate Professor of Medicine, McGill University; Director, Respiratory Division, Joint Cardiorespiratory Service, Royal Victoria Hospital and Montreal Children's Hospital; and RONALD V. CHRISTIE, M.D. (Edinburgh), M.Sc. (McGill), B.Sc. (London), Sc.D. (Dublin), F.A.C.P., F.R.C.P. (London), F.R.C.P. (C), Professor and Chairman of the Department of Medicine, McGill University; Physician-in-Chief, Royal Victoria Hospital. With the assistance of MARGARET E. BECKLAKE, RICHARD E. DONEVAN, ROBERT G. FRASER, J. A. PETER PARE, W. M. THURLBECK. About 560 pages, 7″ x 10″, illustrated. About $15.00. *New—Just Ready!*

W. B. SAUNDERS COMPANY West Washington Square, Phila., Pa. 19105

Please send and bill me:

☐ Doctor's *Easaccount Record System* About $9.50

☐ Hughes' *Pediatric Procedures*_____About $8.00

☐ Easy Pay Plan ($5 per month)

☐ Bates & Christie's *Respiratory Function*_____About $15.00

Name_____ Address_____ SJG 10-64

The Journal of the TENNESSEE MEDICAL ASSOCIATION

Published Monthly

By Tennessee Medical Association

OFFICE OF PUBLICATION, 112 LOUISE AVENUE, NASHVILLE, TENNESSEE 37203

Second Class Postage Paid at Nashville, Tennessee

Volume 57
No. 10

OCTOBER, 1964

Per Year, $5.00
Single Copy, 50 Cents

Published Monthly

Contents

RENOVASCULAR HYPERTENSION: Current Methods of Diagnosis and Treatment, JOHN H. FOSTER, M.D., and H. WILLIAM SCOTT, JR., M.D., Nashville, Tenn. 393

Occlusive Arterial Lesions of Wrist and Hand, W. ANDREW DALE, M.D., Nashville, Tenn. 402

Case Report

Cancer Following "Healed" Gastric Ulcer, CLARENCE B. C. MARSH, M.D., Chattanooga, Tenn., and ELMER W. HEFFERNON, M.D., Boston, Mass. 407

Biliary Fistula Secondary to a .22 Bullet Wound, JOE F. BRYANT, M.D., Lebanon, Tenn. 409

Clinicopathologic Conference 411

President's Letter 418

Editorial 419

In the Public Interest 420

Deaths 422

Programs and News of Medical Societies 422

National News 423

Medical News in Tennessee 424

Personal News 426

Announcements 426

Instructions to Contributors

Manuscripts submitted for consideration for publication in the JOURNAL OF THE TENNESSEE MEDICAL ASSOCIATION should be addressed to the Editor, Dr. R. H. Kampmeier, Vanderbilt University Hospital, Nashville 12, Tennessee.

Manuscripts must be typewritten on one side of letter-weight paper. Either double or triple spacing and wide margins must be provided to facilitate editing which will be legible for the printer.

Bibliographic references should not exceed ten or twelve in number documenting key publications. They should appear at the end of the paper. The bibliographic references must conform to the style used in the American Medical Association publications, as,—Alais, F. G.: What Is Known About It, J. Tennessee M. A., 35:132, 1950.

Illustrations must be mounted on white cardboard and be numbered. The editor will determine the number, if any, of illustrations to be used. Additional illustrations will be charged to the author. The author's name should appear on the back of each illustration.

If reprints are desired, the requested number should be indicated in the letter accompanying the manuscript. The author will be billed by the publisher.

DEVOTED TO THE INTERESTS OF THE MEDICAL PROFESSION OF TENNESSEE

R. H. KAMPMEIER, M.D., Editor

This Association Does Not Officially Indorse Opinions Presented in Different Papers Published herein

Copyright, 1964, by the Tennessee Medical Journal



NTz Nasal Spray gives prompt, dependable decongestion of the nasal membranes for fast symptomatic relief of hay fever. The first spray shrinks the turbinates, restores nasal ventilation and stops mouth breathing. The second spray, a few minutes later, improves sinus ventilation and drainage. Excessive rhinorrhea is reduced.

NTz Nasal Spray also provides decongestive relief for head colds, perennial rhinitis and sinusitis. Supplied in leakproof, pocket-size, squeeze bottles of 20 ml. and in bottles of 30 ml. with dropper.

NTz® Nasal Spray

NTz is more than a simple vasoconstrictor. It contains [N]eo-Synephrine® HCl 0.5%—the efficacy of which is unexcelled—to shrink nasal membranes and provide inner space; [T]henfadil® HCl 0.1% for topical antiallergic action; and [Z]ephiran® Cl 1:5000 (antibacterial wetting agent) to promote the spread of the decongestant components to less accessible nasal areas.

NTz is well tolerated and does not harm respiratory tissues.

NTz, Neo-Synephrine (brand of phenylephrine), Thenfadil (brand of thenyldiamine) and Zephiran (brand of benzalkonium as chloride, refined), trademarks reg. U. S. Pat. Off. 1796M

Winthrop Winthrop Laboratories
New York 18, N. Y.

THE DERMATOSES THAT WERE STEROID-UNTREATABLE

Salt and water retention, edema, overstimulation
the appetite, excessive weight gain, mood swing
these were some of the problems that used to confr
physicians when they wanted to prescribe steroids
dermatoses. For patients already overweight, or v
edema associated with cardiovascular disease,
those who were tense and anxious, steroid treatm
could aggravate their problems. But with the adv
of ARISTOCORT® Triamcinolone, many of th
patients became "steroid-treatable." The reason:
only did *this* steroid provide gratifying symptom
relief, but it did so *without* the penalty of oversti
lation of the appetite, excessive weight gain, salt
water retention, edema, and undesirable euphc
And these benefits have been confirmed for o
patients with steroid-susceptible disorders, as we
those formerly untreatable.



Side Effects: Since it may, under some circumstances, produce many of the unwanted effects common to all cortisone-like drugs, discrimination should always be exercised in administering ARISTOCORT® Triamcinolone. Any of the Cushingoid effects are possible, as are purpura, G.I. ulceration, increased intracranial pressure and subcapsular cataract. Corticosteroids generally may mask outward signs of bacterial or viral infections. Catabolic effects to watch for include muscle weakness and osteoporosis. Weight loss may occur early in treatment but is usually self-limiting. *Contraindications:* While the only absolute contraindications are tuberculosis, herpes simplex and chicken pox, there are some relative contraindications peptic ulcer, acute glomerulonephritis, myasthenia gravis, osteoporosis, fresh intestinal anastomoses, diverticulitis, thrombophlebitis, psychic disturbance, pregnancy, infection) to weigh against expected benefits.

A single daily dose may provide effective control, is convenient for the patient, and can be employed in both initial and maintenance therapy.

MAXIMUM STEROID BENEFIT—MINIMUM STEROID PENALTY

Aristocort®

Triamcinolone

1 mg., 2 mg., 4 mg. or 16 mg. tablets

LEDERLE LABORATORIES • A Division of AMERICAN CYANAMID COMPANY, Pearl River, New York

Lederle

272-4





one of the fundamental drugs in medicine

Smith Kline & French Laboratories

SK&F



FOR YOUR ELDERLY ARTHRITIC PATIENTS...

an effective
GERIATRIC
antiarthritic
with

REASSURING SAFETY FACTORS

Effectiveness, dependability and reassuring Safety Factors make PABALATE-SF a logical choice for antiarthritic therapy in elderly patients—even when osteoporosis, hypertension, edema, peptic ulcer, cardiac damage, latent chronic infection and other common geriatric conditions are present. The potassium salts of PABALATE-SF cannot contribute to sodium retention...the enteric coating assures gastric tolerance...and clinical experience shows that this preparation does not precipitate the serious reactions often associated with corticosteroids or pyrazolone derivatives.

Side Effects: Occasionally, mild salicylism may occur, but it responds readily to adjustment of dosage. Precaution: In the presence of severe renal impairment, care should be taken to avoid accumulation of salicylate and PABA. Contraindicated: An hypersensitivity to any component.

Also available: PABALATE—when sodium salts are permissible. PABALATE-HC—Pabalate-SF with hydrocortisone.

Pabalate-SF

In each persian-rose enteric-coated tablet: potassium salicylate 0.3 Gm., potassium aminobenzoate 0.3 Gm., ascorbic acid 50.0 mg.

—the new, convenient way to prescribe
PABALATE-SODIUM FREE

A. H. ROBINS CO., INC., RICHMOND 20, VIRGINIA

RECOGNIZE THIS PATIENT?



"The arthritis doesn't get any better... I can't get out. I never see anybody. It's awful to be sick... I was always so active."

When you recognize depression and anxiety related to an organic condition —*add 'Deprol' to your therapy*

Typical organic conditions in which 'Deprol' helps control related depression and anxiety:

cardiovascular disorders ■ arthritis ■ cancer ■ menopause ■ alcoholism ■ obesity ■ asthma, hay fever and related allergies ■ chronic infectious diseases ■ dermatoses ■ G.I. disorders, and many other debilitating or life-threatening illnesses

Advantages of 'Deprol'

1. By relieving both depression and anxiety, 'Deprol' lifts the mood of the depressed patient without the agitation and "jitters" that often accompany "energizer" therapy alone.
2. 'Deprol' relaxes physical tensions, restores normal sleep and revives interest in food.
3. 'Deprol' acts rapidly—patients often respond within a week or two.
4. 'Deprol' is compatible with drugs used to treat co-existing organic conditions.
5. 'Deprol' is relatively nontoxic and free of side effects.

Deprol®

meprobamate 400 mg. + benactyzine hydrochloride 1 mg.

Side effects: Slight drowsiness and, rarely, allergic or idiosyncratic reactions, due to meprobamate, and occasional dizziness or feeling of depersonalization in higher dosage, due to benactyzine, may occur. **Contraindications:** Previous allergic or idiosyncratic reactions to meprobamate contraindicate subsequent use of meprobamate or meprobamate-containing drugs. **Precautions:** Should administration of meprobamate cause drowsiness, the dose should be reduced. Operation of motor vehicles or machinery or other activity requiring alertness should be avoided if these symptoms are present. Effects of excessive alcohol may possibly be increased by meprobamate. Although suicides with 'Deprol' have not been reported, prescribe cautiously and in small quantities to patients with suicidal tendencies. Massive overdosage of meprobamate may produce lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse. Even though it has not been reported with 'Deprol', consider the possibility of dependence, particularly in patients with history of drug or alcohol addiction; withdraw gradually after prolonged use at high dosage. *Complete product information available in the product package, and to physicians on request.*

Usual adult dosage: 1 tablet t.i.d. or q.i.d. May be increased gradually, as needed, to 6 tablets daily. With establishment of relief, may be gradually reduced to maintenance levels. **Supplied:** Light-pink, scored tablets Bottles of 50.

WALLACE LABORATORIES / *Cranbury, N. J.*

CD-801



some patients need

ACHROCIDIN®

TETRACYCLINE HCI-ANTIHISTAMINE-ANALGESIC COMPOUND

Each Tablet contains:

ACHROMYCIN® Tetracycline HCl	125 mg.	Caffeine	30 mg.
Acetophenetidin (Phenacetin)	120 mg.	Salicylamide	150 mg.
		Chlorothen Citrate	25 mg.

Effective in controlling tetracycline-sensitive bacterial infection and providing symptomatic relief in allergic diseases of the upper respiratory tract. Possible side effects are drowsiness, slight gastric distress, overgrowth of nonsusceptible organisms. Tooth discoloration may occur only if the drug is given during tooth formation (late pregnancy, the neonatal period, early childhood). Reduce dosage in impaired renal function. Average Adult Dosage: 2 Tablets four times daily.

LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, New York

Lederle

8264-4



Of 1,028 patients with confirmed respiratory infections... 954 or 92.8% were treated successfully with Signemycin®

Note:
Hammerl* selected his patients for treatment with Signemycin on the basis of demonstrated bacteriological resistance to other antibiotics or failure of previous therapy. Of 100 patients with various respiratory tract infections, 95 responded to Signemycin. Pathogens isolated included staphylococci and *Diplococcus pneumoniae*.

*Hammerl, H.: Wien. Med. Wschr. 108:629, July 26, 1958.

Condition	No. of Patients	No. Cured with Signemycin
Abscess, pulmonary	17	16
Bronchiectasis	19	13
Bronchitis	286	267
Bronchopneumonia	192	179
Empyema	12	11
Pneumonia, lobar	150	146
Pneumonia, other febrile	160	150
Various infected pneumopathies	192	172
Totals	1,028	954 (92.8%)

consistently effective...often when others fail

Signemycin®

tetracycline HCl, 167 mg.; oleandomycin as triacetyloleandomycin, 83 mg. capsules (250 mg.)

Also available as Syrup, Pediatric Drops, and half-strength Capsules

Brief Summary and Bibliography follow.

Science for the world's well-being® Pfizer *Since 1849*

PFIZER LABORATORIES Division, Chas. Pfizer & Co., Inc. New York, New York 10017



*a result of 'METHEDRINE'® brand METHAMPHETAMINE HYDROCHLORIDE therapy

Her once unruly appetite is now well tamed with 'Methedrine' (methamphetamine hydrochloride)...an easy way to help control food craving and "hunger pains."

Side effects: Insomnia may occur if taken later than 6 hours before retiring. The usual peripheral actions of sympathomimetic amines (vasoconstriction and acceleration of the heart) are minimal and little noticed on low or moderate dosage.

Complete literature available on request from Professional Services Dept. PML.

Contraindications and precautions: Should not be used in patients with myocardial degeneration, coronary disease, marked hypertension, hyperthyroidism, insomnia or a sensitivity to ephedrine-like drugs. Moderate hypertension in the obese is not necessarily a contraindication since it may be relieved as the overweight is reduced.

'Methedrine' brand Methamphetamine Hydrochloride: Tablets–5 mg., scored, in bottles of 100 and 1000.

BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, N.Y.



Of 1,021 children with various confirmed infections... 950 or 93.0% were treated successfully with Signemycin®

Note:
The effectiveness of Signemycin was demonstrated by Chattas and his co-workers* who administered Signemycin to 30 children with serious staphylococcal infections resistant to commonly used antibiotics. Only one failed to respond. In each case the use of this drug was indicated by antibiogram. Those children treated with a nonselected antibiotic—for comparative purposes—took three times longer to recover.

Chattas, A. et al.: Antibiot. Med. 7:300, May, 1960.

Condition	No. of Patients	No. Cured with Signemycin
Eye, ear, nose, throat infections	368	343
Respiratory infections	369	346
Gastrointestinal infections	42	30
Skin and soft-tissue infections	38	37
Deep-seated or generalized infections	47	44
Various conditions	157	150
Totals	1,021	950 (93.0%)

consistently effective...often when others fail

Signemycin®

tetracycline HCl, 167 mg.; oleandomycin as triacetyloleandomycin, 83 mg. capsules (250 mg.)

Signemycin is also available as half-strength Capsules, preconstituted raspberry-flavored Syrup and Pediatric Drops

Brief Summary and Bibliography follow.

Science for the world's well-being® Pfizer *Since 1849*

PFIZER LABORATORIES Division, Chas. Pfizer & Co., Inc. New York, New York 10017

Signemycin® Bibliography

1. Adams, J.: J. Tenn. Med. Ass. 50:446, Nov., 1957. **2.** Arachi, N. and Gheradi, F.: Quad. Urol. 9:156, Apr.-June, 1959. **3.** Arneil, G. C.: Antibiot. Ann. 1958-1959:327. **4.** Arrigoni, G. et al.: Minerva Med. 48:2701, Aug. 25, 1957. **5.** Baur, A.: Aerztl. Prax. 11:1845, Dec. 5, 1959. **6.** Bellomio, S. et al.: Riv. Ital. Tracoma, vol. 10, Nos. 1-2, Jan.-June, 1958. **7.** Bellomio, S. et al.: Riv. Ital. Tracoma, vol. 11, No. 1, Jan.-Mar., 1959. **8.** Belonoschkin, B. and Lindgren, M.: Svensk. Lakartidn. 56:2134, July 31, 1959. **9.** Bergdahl, U.: Svensk. Lakartidn. 55:1715, June 6, 1958. **10.** Bhattacharyya, M. N. and Bhuyan, J. N.: Antiseptic 56:611, Aug., 1959. **11.** Blass, R.: Schweiz. Med. Wschr. 89:158, Feb. 7, 1959. **12.** Bolognesi, C.: Minerva Med. 48:2695, Aug. 25, 1957. **13.** Candela, R. B.: Med. Esp. 46:273, Oct., 1961. **14.** Cappelli, E.: Minerva Med. 48:2690, Aug. 25, 1957. **15.** Carter, C. H. and Maley, M. C.: Antibiot. Ann. 1956-1957:51. **16.** Caruselli, M. and Musca, A.: Minerva Med. 51:3516, Oct. 17, 1960. **17.** Ceitlin, J.: Med. Panamer. 15:72, Aug. 1, 1960. **18.** Chattas, A. et al.: Antibiot. Med. 7:300, May, 1960. **19.** Chiarenza, A.: Minerva Med. 48:2692, Aug. 25, 1957. **20.** Cooper, J. et al.: Antibiot. Med. 5:302, May, 1958. **21.** Cupples, J. F. B. and Perry, A. W.: Canad. Med. Ass. J. 77:699, Oct. 1, 1957. **22.** David, N. A. and Carter, P. B.: Rocky Mountain Med. J. 58:27, Mar., 1961. **23.** Davis, W. G.: Clin. Rev. 1:21, Apr., 1958. **24.** de Lellis, J.: Dia Med., Apr. 24, 1958, p. 824. **25.** Dienz, H.: Aerztl. Prax. 13:1797, 1961. **26.** Dietel, V. and Meissner, F.: Deutsch. Gesundh. 16:2470, Dec. 28, 1961. **27.** Dryjski, J.: Pol. Tyg. Lek. 24:1113, June 24, 1959. **28.** Durrieu, C. A. et al.: Antibiot. Ann. 1958-1959:297. **29.** Faz Tabio, H.: Rev. Cuba. Pediat. 30:219, Apr., 1958. **30.** Febles Alonzo, D. and Batthyany, C.: Actas Ginecotocol. (Uruguay) 13:4, Aug., 1959. **31.** Febles Alonzo, D. and Biderman, I.: Antibiot. Ann. 1958-1959:270. **32.** Fiora, F. and Compa, F.: Dia Med., Apr 3, 1958, p. 570. **33.** Garre, E.: Antibiot. Med. 7:285, May, 1960. **34.** Geiger, K.: Praxis 15:365, Apr. 9, 1959. **35.** Gemma, G. B. et al.: Minerva Med. 48:2643, Aug. 25, 1957. **36.** Gerner, G.: Arzneimittelforschung 9:484, Aug., 1959. **37.** Grazia, G.: Clin. Pediat. (Bologna) 41:1005, Nov., 1959. **38.** Greco, O.: Med. Condotto-Med. Prat. 9:497, 1958. **39.** Hammerl, H.: Wien. Med. Wschr. 108:629, July 26, 1958. **40.** Henne, H. F.: Med. Klin., No. 29, July 18, 1958, p. 1267. **41.** Heredia Diaz, J. et al.: Medicina (Mex.) 38:308, July 10, 1958. **42.** Herrera, W. A.: Dia Med. 30:3116, Dec. 8, 1958. **43.** Hoffmann, H.: Medizinische (Stuttgart) 45:1830, Nov. 8, 1958. **44.** Kelleher, D.: Practitioner 182:227, Feb., 1959. **45.** Kleine, W. and Hagen, H.: Ther. Gegenw 98:171, Apr., 1959. **46.** Klovstad, O.: T. Norsk. Laegeforen. 77:681, Aug. 15, 1957. **47.** Kobari, K. and Tajiri, I.: Naika No Ryoiki (Field of Internal Medicine) 7:245, May, 1959. **48.** Kohler, H. F.: Clin. Rev. 1:16, Apr., 1958. **49.** Kraljevic, R. et al.: Antibiot. Med. 5:364, June, 1958. **50.** La Caille, R. A. and Prigot, A.: Antibiot. Ann. 1956-1957:67. **51.** Lapeyre, L. et al.: Marseille Med. 99:953, 1962. **52.** Levi, W. M., Jr. and Kredel, F. E.: J. S. Carolina Med. Ass. 53:178, May, 1957. **53.** Loughlin, E. H. et al.: Antibiot. Ann. 1958-1959:293. **54.** Loughlin, E. H. et al.: Antibiot. Med. 7:739, Dec., 1960. **55.** Mathur, S. N. and Joshi, V. S.: J. Indian Med. Ass. 34:437, June 1, 1960. **56.** Moggian, G.: Minerva Med. 48:2648, Aug. 25, 1957. **57.** Molinelli, E. A. et al.: Antibiot. Ann. 1957-1958:692. **58.** Montilli, G. and Avellino, M.: Dermatologica (Basel) 9:2, 1958. **59.** Morador, J. L. et al.: Antibiot. Ann. 1959-1960:716. **60.** Morador, J. L. and Saldana Tate, L.: An. Ateneo, Clin. Quirur. 1:52, Jan., 1958. **61.** Morel, A. S.: Clin. Rev. 1:18, July, 1958. **62.** Morey, G. S. et al.: Rev. Hosp. Nino (Lima) 18:293, 1957. **63.** Ottolenghi, C. E. et al.: Bol. Soc. Cir. B. Air. 41:739, Nov. 6, 1957. **64.** Pagola, J. G. et al.: Antibiot. Ann. 1958-1959:287. **65.** Pavone, M. et al.: Minerva Urol. 70:121, Sept.-Oct., 1958. **66.** Porrazzo, F.: Gazz. Med. Ital. 118:550, Dec., 1959. **67.** Prats, F. and de la Parra, M. A.: Antibiot. Ann. 1959-1960:484. **68.** Prokop, O.: Prakt. Arzt. 12:145, Feb. 15, 1958. **69.** Ramirez Boettner, C. M. et al.: Rev. Med. Paraguay 5:269, July-Sept., 1960. **70.** Randig, K.: Deutsch. Med. J. 8:447, Aug. 15, 1957. **71.** Saavedra Amaro, S. and Lopez Zepeda, L.: Medicina (Mex.) 38:396, Aug. 25, 1958. **72.** Saldana Sotomayor, F.: Medicina (Mex.) 39:191, May 10, 1959. **73.** Santos, A.: Rev. Brasil. Med. 16:463, July, 1959. **74.** Schenone, H.: Antibiot. Ann. 1958-1959:316. **75.** Schunk, A.: Int. Rec. Med. 173:143, Mar., 1960. **76.** Sgarzini, L. and Amato, R.: Ann. Stomat. 7:499, July, 1958. **77.** Shubin, H.: Antibiot. Med. 4:174, Mar., 1957. **78.** Sundberg, R. H.: Antibiot. Med. 7:115, Feb., 1960. **79.** Talbot, J. R.: Wisconsin Med. J. 57:237, June, 1958. **80.** Tato, J. M. et al.: Antibiot. Ann. 1957-1958:675. **81.** Weithofer, W.: Medizinische (Stuttgart) No. 33-34:1490, Aug. 22, 1959. **82.** Willcox, R. R. and Rosedale, N.: Brit. J. Vener. Dis. 38:19, Mar., 1962. **83.** Willemot, J. P. et al.: Bruxelles Med. 38:1026, June 22, 1958. **84.** Winton, S. S. and Chesrow, E. J.: Antibiot. Ann. 1956-1957.55. **85.** Wolman, B.: Practitioner 185:199, Aug., 1960. **86.** Yodh, B. B.: J. J. J. Group Hosp. 5:183, July, 1960. **87.** Zaldivar, C. G. and Falcone, F. L.: Rev. Hosp. Nino (Lima) 20:141, June, 1958.

SIGNEMYCIN®

Side Effects: Glossitis and allergic reactions, as well as severe anaphylactoid reactions, have been reported as rare side effects. Should significant reaction or idiosyncrasy occur, discontinue medication and institute countermeasures. Use of tetracycline during the last trimester of pregnancy, neonatal period and early childhood may cause discoloration of developing teeth. Reduce usual oral dosage and consider serum level determinations in patients with impaired renal function to prevent possible liver toxicity due to excessive accumulation of antibiotic in the serum.

Precautions: Overgrowth of nonsusceptible organisms may occur. In such cases, discontinue medication and institute appropriate specific therapy as indicated by susceptibility testing. Aluminum hydroxide gel given with antibiotics has been shown to decrease their absorption and is contraindicated. The coloring agents used in Signemycin Syrup and Pediatric Drops may produce red discoloration of stools.

Triacetyloleandomycin, a constituent of Signemycin, administered to adults in daily oral doses of 1.0 Gm. (3 Gm. Signemycin) for periods of more than ten days may produce hepatic dysfunction and jaundice. In the rare patient who requires this high dosage level of Signemycin initially, liver function should be carefully followed and dosage should be reduced, as promptly as possible, to the usual recommended range of 1.0 to 2.0 Gm. per day. Therefore, Signemycin is recommended primarily for the treatment of acute or severe infections, with treatment restricted to a ten-day period. If clinical judgment dictates continuation of therapy beyond ten days, serial monitoring of the liver profile should be carried out, including BSP, transaminase, and cephalin flocculation tests. Changes observed in liver function were reversible following discontinuation of the drug.

Formulas: Capsules: 250 mg. Signemycin (167 mg. tetracycline HCl and 83 mg. oleandomycin as triacetyloleandomycin).

Capsules: 125 mg. Signemycin (83 mg. tetracycline HCl and 42 mg. oleandomycin as triacetyloleandomycin).

Syrup: 125 mg. Signemycin (tetracycline equivalent to 83 mg. tetracycline HCl and 42 mg. oleandomycin as triacetyloleandomycin) per 5 cc.

Pediatric Drops: 100 mg. Signemycin (tetracycline equivalent to 67 mg. tetracycline HCl and 33 mg. oleandomycin as triacetyloleandomycin) per cc.

More detailed professional information available on request.

Science for the world's well-being® Pfizer *Since 1849*

PFIZER LABORATORIES Division, Chas. Pfizer & Co., Inc. New York, New York 10017



Of 5,057 patients with confirmed infections of all body systems... 4,731 or 93.5% were treated successfully with Signemycin®

Note:

The high rate of response to Signemycin in these cases is noteworthy because the totals include many patients with difficult-to-treat infections, many whose infections had proved resistant to other agents, and many who had been treatment failures on other therapy.[1-87] In addition the following criteria were used for the cases cited: (1) only published results were used (2) results were confirmed by clinical and/or laboratory findings (3) patients were cured, not "improved" (4) dosage conformed with current recommendations in the United States (5) no other anti-infective agents were used concomitantly (6) no instance of prophylactic use was included in these tabulations.

Condition	No. of Patients	No. Cured with Signemycin
Ear, nose and throat infections	507	465
Respiratory infections	1,028	954
Gastrointestinal infections	425	387
Genitourinary infections	748	684
Skin and soft-tissue infections	1,088	1,036
Bone and joint infections	71	64
Deep-seated or generalized infections	257	251
Obstetrical & gynecological infections	341	320
Miscellaneous conditions	592	570
Totals	5,057	4,731 (93.5%)

consistently effective...often when others fail

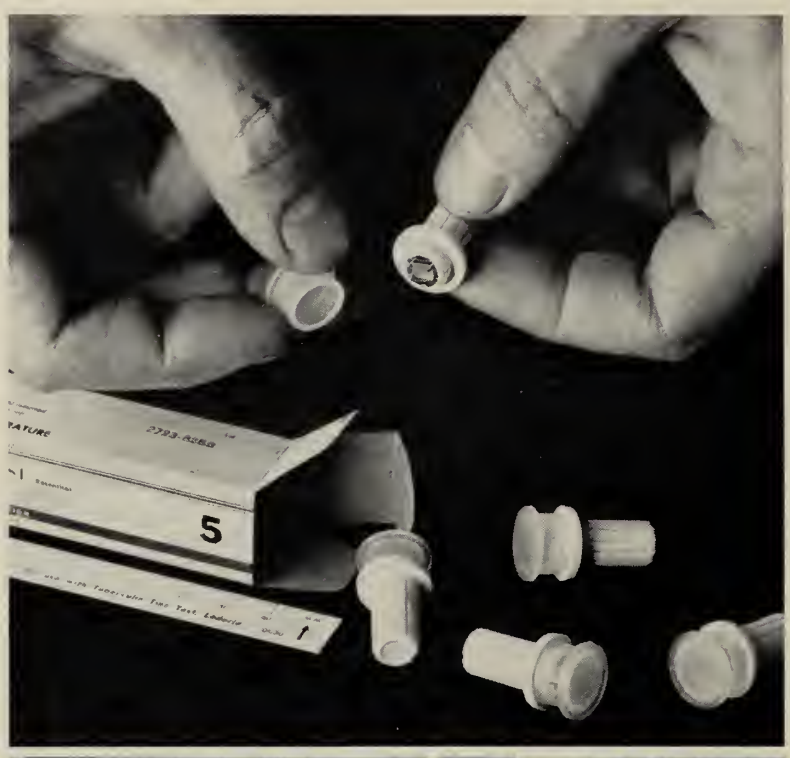
Signemycin®

tetracycline HCl, 167 mg.; oleandomycin as triacetyloleandomycin, 83 mg. capsules (250 mg.)

Also available as Syrup, Pediatric Drops, and half-strength Capsules

Science for the world's well-being® Pfizer *Since 1849*

PFIZER LABORATORIES Division, Chas. Pfizer & Co., Inc. New York, New York 10017





TAKE 5

...and find that a TB screening test has never been quite so easy

SWAB THE ARM— UNCAP A TINE TEST— PRESS—DISCARD THAT'S ALL THERE IS TO IT.

Comparable to the Mantoux in accuracy and sensitivity, the TUBERCULIN, TINE TEST is now available in plastic-capped units uniquely suited to general practice needs. They are so simple to use that you can test every patient with ease. Since it requires no refrigeration, the new package of five Tine Test units can stand on any convenient table in your examining rooms, ready for routine use. Side effects are possible but very rare: vesiculation, ulceration or necrosis at test site. Contraindications, none; but use with caution in active tuberculosis.

available as the new individually-capped unit, boxes of 5, or in cartons of 25

TUBERCULIN, TINE TEST
(Rosenthal) Lederle

LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, N.Y. Lederle
7899-4

for you and your patients...

greater bacteriostatic protection than with any other leading antibacterial bar soap... new Safeguard



New Safeguard provides the regular user with greater sustained reduction of skin bacteria than any other leading antibacterial bar soap. This heightened effectiveness is achieved through a more potent, yet excellently tolerated combination of antibacterial agents.* Exhaustive laboratory and clinical tests have proved Safeguard's...

- **superior residual bacteriostatic effect**
- **superior control of S. aureus**
- **unsurpassed safety and mildness**

*Safeguard contains 3,5-di- and 3,4',5-tribromosalicylanilides, 4,4'-dichloro-3- (trifluoromethyl) carbanilide, and 3,4,4'-trichlorocarbanilide.

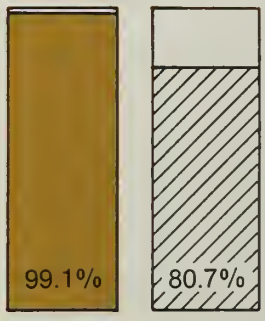
here are the facts on Safeguard's superior antibacterial effectiveness

The superior antibacterial action of Safeguard has been demonstrated by a variety of techniques. Below are some of the comparative results obtained with Safeguard ▬ and another leading deodorant and antibacterial bar soap containing 0.5% hexachlorophene and 0.5% 3,4,4'-trichlorocarbanilide. ▨

superior residual antibacterial effect proved by handwashing tests

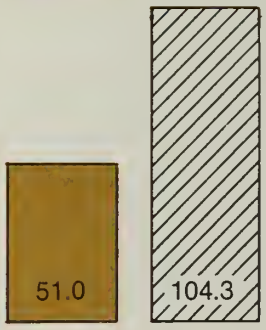
In a modified Price multiple washbasin procedure, Safeguard attained an average reduction of 99.1% in the number of organisms recoverable from the final rinse water, as compared to an average of 80.7% for the other antibacterial bar soap tested. Both products had been used exclusively for four days prior to evaluation.

Safeguard has also proved its superior residual bacteriostasis in field tests conducted under everyday household conditions as measured by a simplified washbasin technique.



superior residual antibacterial effect confirmed by skin stripping technique

Safeguard and the other antibacterial bar soap were used for normal everyday toilet purposes by a group of housewives for 14 days. Layers of superficial skin cells were then taken by a stripping technique to determine the density of the bacterial population. The average count per 2.25 sq. cm. for Safeguard was 51.0 while the finding for the other antibacterial bar was 104.3 – more than double Safeguard's reading.



superior control of S. aureus demonstrated in laboratory and field tests

In vitro serial dilution tests with **S. aureus** showed Safeguard to inhibit growth at a minimal concentration of 3 p.p.m. while the other antibacterial bar soap required 4 p.p.m. to produce this effect. Interestingly enough, a leading surgical scrub liquid detergent containing 3% hexachlorophene was inhibitory at 7 p.p.m. in this instance. With two antibiotic resistant strains of **S. aureus,** Safeguard maintained its level of effectiveness. **In vivo** studies have also demonstrated Safeguard's superiority in reducing the number of persons carrying this potential pathogen.

testing has provided extensive evidence of Safeguard's mildness and safety

Repeat patch testing and careful professional observation of the skin of regular users has shown that Safeguard is as mild as any other quality toilet soap – as suitable for the nursery as for the operating room. Exhaustive tests have also documented the safety of its antibacterial components.

SAFEGUARD'S IMPORTANCE TO YOU... Safeguard's superior antibacterial effect makes it of particular value to physicians and nurses because of their greater than average exposure to pathogenic organisms.

For further information please write to: Director of Medical Programs, P.O. Box 599. PROCTER & GAMBLE, CINCINNATI, OHIO 45201



002R64



FOR YOUR ELDERLY ARTHRITIC PATIENTS...

an effective
GERIATRIC
antiarthritic
with

REASSURING SAFETY FACTORS

Effectiveness, dependability and reassuring Safety Factors make PABALATE-SF a logical choice for antiarthritic therapy in elderly patients—even when osteoporosis, hypertension, edema, peptic ulcer, cardiac damage, latent chronic infection and other common geriatric conditions are present. The potassium salts of PABALATE-SF cannot contribute to sodium retention... the enteric coating assures gastric tolerance... and clinical experience shows that this preparation does not precipitate the serious reactions often associated with corticosteroids or pyrazolone derivatives.

Side Effects: Occasionally, mild salicylism may occur, but it responds readily to adjustment of dosage. Precaution: In the presence of severe renal impairment, care should be taken to avoid accumulation of salicylate and PABA. Contraindicated: An hypersensitivity to any component.

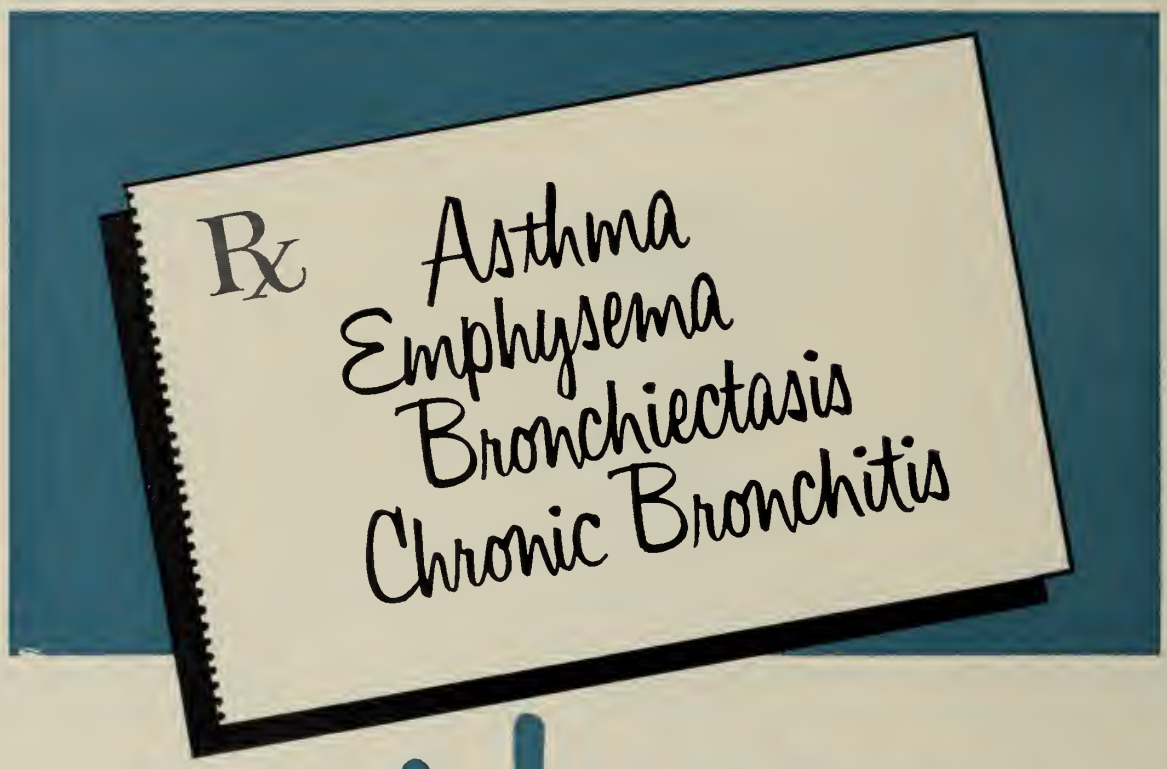
Also available: PABALATE—when sodium salts are permissible. PABALATE-HC—Pabalate-SF with hydrocortisone.

Pabalate-SF

In each persian-rose enteric-coated tablet: potassium salicylate 0.3 Gm., potassium aminobenzoate 0.3 Gm., ascorbic acid 50.0 mg.

—the new, convenient way to prescribe
PABALATE-SODIUM FREE

A. H. ROBINS CO., INC., RICHMOND 20, VIRGINIA



mudrane®

The Bronchodilator with the intermediate dose of KI

The fast-disintegrating, uncoated tablet gives relief to the asthmatic in 15 minutes. The ephedrine-phenobarbital balance climinates nervousness. It relaxes broncho-constriction, liquefies mucus-plugging and is buffered for tolerance.

Each tablet contains Aminophylline 130 mg., Ephedrine HCl 16 mg., Phenobarbital 22 mg. (Warning: may be habit-forming), Potassium Iodide 195 mg. Dosage: One tablet, 3 or 4 times a day. Precautions: Usual for aminophylline-ephedrine-phenobarbital. Iodides may cause nausea, and very long use may cause goiter. Iodide contraindications: tuberculosis, pregnancy. Issued in 100's, 1000's.

Also available as

mudrane® GG

Formula is identical to Mudrane except that Glyceryl Guaiacolate 100 mg. replaces the Potassium Iodide as the mucolytic expectorant. Issued in 100's and 1000's.

and

mudrane® GG ELIXIR

The formula of four teaspoonfuls Elixir equals one Mudrane GG tablet. Dosage 6 to 12 years: One to two teaspoonfuls 3 or 4 times a day. Under 6 years, adjust dosage according to age. Issued in pints and half gallons.

WILLIAM P. POYTHRESS & COMPANY, INC., RICHMOND, VIRGINIA

Manufacturers of ethical pharmaceuticals since 1856

SAINT ALBANS

PSYCHIATRIC HOSPITAL

(A Non-Profit Organization)

Radford, Virginia

Telephone: 639-2482

STAFF

James P. King, M.D., Director

William D. Keck, M.D.
Clinical Director
James K. Morrow, M.D.
Silas R. Beatty, M.D.

Edward W. Gamble, III, M.D.
Morgan E. Scott, M.D.
J. William Giesen, M.D.
Internist (Consultant)

Clinical Psychology:
Thomas C. Camp, Ph.D.
Artie L. Sturgeon, Ph.D.

Don Phillips
Administrator

AFFILIATED CLINICS

Bluefield Mental Health Center
525 Bland St., Bluefield, W. Va.
David M. Wayne, M.D.
Phone: 325-9159

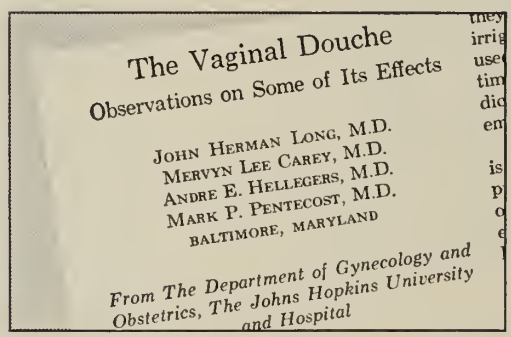
Beckley Mental Health Center
109 E. Main Street, Beckley, W. Va.
W. E. Wilkinson, M.D.
Phone: 253-8397

Charleston Mental Health Center
1206 Quarrier Street, Charleston, W. Va.
Malcolm G. MacAulay, M.D.
Phone: 344-3578

Mental Health Clinic
Professional Building, Wise, Va.
Pierce D. Nelson, M.D.
Phone: 328-2211

A Valuable Contribution To Medical Literature

A DEFINITIVE STUDY ON DOUCHING



The Vaginal Douche

Observations on Some of Its Effects

JOHN HERMAN LONG, M.D.
MERVYN LEE CAREY, M.D.
ANDRE E. HELLEGERS, M.D.
MARK P. PENTECOST, M.D.
BALTIMORE, MARYLAND

From The Department of Gynecology and Obstetrics, The Johns Hopkins University and Hospital

A SEARCH OF MEDICAL LITERATURE REVEALS NO COMPARABLE OBJECTIVE EVALUATION OF THE SUBJECT.

The authors state at the outset,

"Each physician has his own idea of the value or harm of the vaginal douche and many have expressed such ideas in writing. Such opinions have been arrived at without any intensive investigation or observation of subjects using douches as compared to those not using them. The purpose of this study is to report our observations on three groups of patients, one taking no douches, a second douching with a medicated solution* and a third douching with plain water."[1]

1. West. J. Surg., Obsts. & Gynec.: *71*:122-127, 1963

*The medicinal powder used in this study was META CINE®, a scientifically formulated preparation containing: papain, lactose, citric acid, methyl salicylate, eucalyptol, menthol and chlorothymol.

OBSERVATIONS BASED ON EXTENSIVE AND THOROUGH EXAMINATION SCHEDULE.

"One hundred patients were selected at random, regardless of their chief complaint, from the general population attending the Out-Patient Gynecology Clinic of The Johns Hopkins Hospital. Those selected were reexamined at 1, 3, 6, 9 and 12 months after the initial visit."

"At intervals patients were switched to the regimen of another group so that comparison of the effect of douching or not douching might be made in the same individual."

Three years were required to complete the study.

An evaluation of the objective findings of the study demonstrates that douching with META CINE® had the following effects on vaginal secretion:

- increased Doderlein organisms,
- proved effective in lowering WBC counts,
- proved effective in increasing glycogen content.

META CINE® was found to be a good antagonist to vaginal discharge and irritation—and also proved effective in reducing cervicitis.

No untoward effects of douching were encountered in the study.

Reprints of the complete study and professional samples of Meta Cine are available on request.

BRAYTEN

BRAYTEN PHARMACEUTICAL COMPANY • *Chattanooga 9, Tennessee*



In Sprains, Strains and Muscle Spasm, 'Soma' Compound

numbs the pain...not the patient

A potent analgesic and a superior muscle relaxant

1. A sprain or fracture is not a big clinical problem—but it does hurt. And if there is housework to do and kids to mind, the patient needs something to numb the pain.

2. A.P.C. compounds have limited usefulness; and the patient can buy them without your prescription. Unfortunately, most of them are too mild to be effective for sprains—and more potent products too often make the patient feel 'dopey'.

3. 'Soma' Compound is ideal in these cases. Since it contains both 'Soma' (carisoprodol) and acetophenetidin it is both a potent analgesic and a superior muscle relaxant; it also contains caffeine to offset any drowsiness *("numbs the pain... not the patient")*.

4. Why not try 'Soma' Compound? Dosage is 1 or 2 tablets q.i.d. For more severe pain, try 'Soma' Compound + Codeine. Dosage: 1 or 2 tablets q.i.d.

5. Hypersensitivity to carisoprodol may occur rarely. Codeine may produce addiction, nausea, vomiting, constipation or miosis.

Soma® Compound

carisoprodol 200 mg., acetophenetidin 160 mg., caffeine 32 mg.

Soma® Compound + Codeine

carisoprodol 200 mg., acetophenetidin 160 mg., caffeine 32 mg., codeine phosphate 16 mg. (Warning—may be habit forming.)

®WALLACE LABORATORIES / *Cranbury, N.J.*

CSO-9193



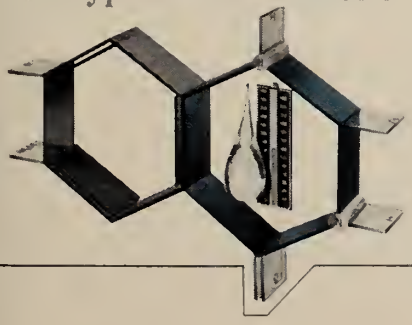
Just turned hypertensive

A 15 mm. Hg drop in diastolic pressure would also suit her very well

For suitably gradual, physiologic hypotensive treatment



HYDROMOX®
QUINETHAZONE·TABLETS
antihypertensive diuretic



HYDROMOX Quinethazone is excellent for use in early hypertension. Extremely well tolerated, the average reported reduction in diastolic pressure is 15 mm. Hg,[1,2] just right for patients with mild to moderate diastolic elevations. Systolic pressure lowered accordingly. A convenient, single daily dose of one to two 50 mg. tablets is usually sufficient.

INDICATED in hypertension with or without edema, and in all types of edema involving salt retention. May be helpful in some cases of lymphedema, idiopathic edema and edema due to venous obstruction.

SIDE EFFECTS: Skin rash (rare), gastrointestinal disturbances, weakness and dizziness, seldom so severe that drug should be stopped. Generally, the adverse effects sometimes associated with the thiazide diuretics are possible. Pre-existing electrolyte abnormalities may be aggravated.

CONTRAINDICATION: Anuria.

1. Steigmann, F., and Griffin, R.: Evaluation of Quinethazone, a New Diuretic. J. Amer. Geriat. Soc. 11:945 (Oct.) 1963.

2. Schwartz, M.: Office Evaluation of a New Diuretic in Patients with Hypertensive Diseases. Scientific Exhibit Presented at the Clinical Meeting of the American Medical Association, Los Angeles, California, Nov. 25-28, 1962.

LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, N.Y. Lederle

8373-4

Nashville Surgical Supply Company

The Physician and Hospital's Complete Supply

& Service Source

Physicians equipment and supplies

Hospital equipment and supplies

Laboratory equipment and supplies

THE MOST COMPLETE DRUG AND BIOLOGICAL SUPPLY SOURCE IN TENNESSEE

Distributor for Standard and Mattern X-Ray Equipment and Supplies

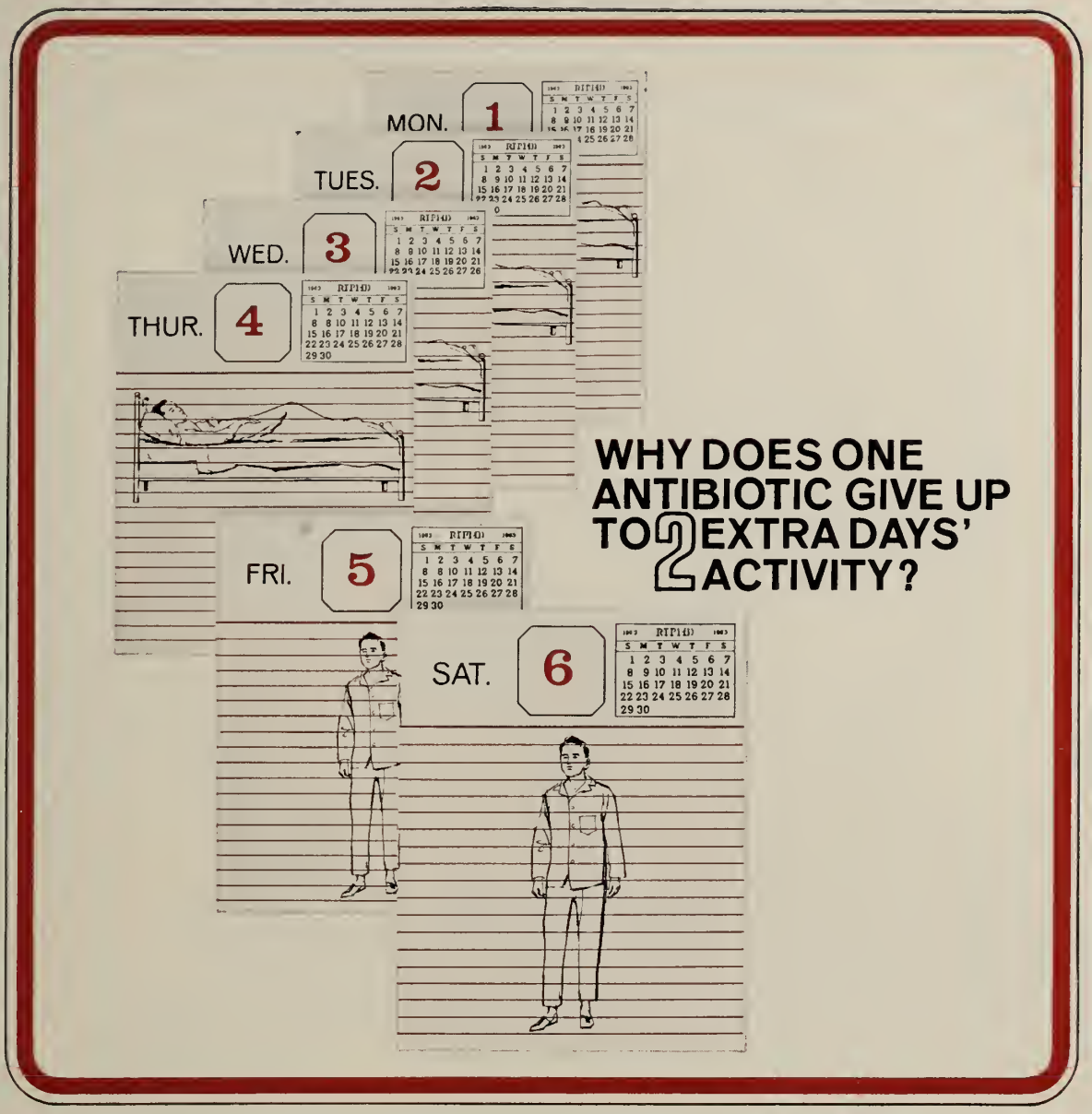
24-Hour Emergency Service

Nashville Surgical Supply Co., Incorporated

1911 Church St.

Nashville, Tennessee

Phone AL 5-4601



Because it is more resistant to disintegration, has a lower renal clearance rate than earlier tetracyclines[1]...a favorable depot effect resulting from protein binding and greater mg. potency...all giving higher, sustained *in vivo* activity which continues long after the last dose.

DECLOMYCIN®

DEMETHYLCHLORTETRACYCLINE HCl

Effective in a wide range of everyday infections — respiratory, urinary tract and others — in the young and aged — the acutely or chronically ill—when the offending organisms are tetracycline-sensitive.
Side Effects typical of tetracyclines which may occur: glossitis, stomatitis, proctitis, nausea, diarrhea, vaginitis, dermatitis, overgrowth of nonsusceptible organisms. Also: photodynamic reaction (making avoidance of direct sunlight advisable) and, very rarely, anaphylactoid reaction. Reduce dosage in impaired renal function. The possibility of tooth discoloration during development should be considered in administering any tetracycline in the last trimester of pregnancy, in the neonatal period, and in early childhood. Capsules, 150 mg. and 75 mg. of demethylchlortetracycline HCl. *Average Adult Daily Dosage:* 150 mg. q.i.d. or 300 mg. b.i.d. 1. Kunin, C. M.; Dornbush, A. C., and Finland, M.: Distribution and Excretion of Four Tetracycline Analogues in Normal Young Men. *J. Clin. Invest.* 38:1950 (Nov.) 1959.

LEDERLE LABORATORIES • A Division of AMERICAN CYANAMID COMPANY, Pearl River, New York
7517-3

Lederle



and it's not a once-over-lightly one, either. All rubber stoppers used in Lilly ampoules are scrupulously cleaned with a detergent and hot deionized water in a special washing machine like the one pictured above. This removes any foreign matter adhering to them. Then the stoppers are autoclaved at 120° to 121°C. for one hour. They are now clean, sterile, and ready for use. In case the stoppers are not used within seventy-two hours, they are returned for resterilization. □ This meticulous process is only one of the many safeguards to insure the quality of the finished product and to protect the ultimate user.

Eli Lilly and Company • Indianapolis 6, Indiana, U.S.A.

Lilly

401196

Journal of the Tennessee Medical Association
OWNED AND PUBLISHED BY THE ASSOCIATION
Volume 57 OCTOBER, 1964 Number 10

RENOVASCULAR HYPERTENSION: Current Methods of Diagnosis And Treatment*

JOHN H. FOSTER, M.D. and H. WILLIAM SCOTT, JR., M.D., Nashville. Tenn.

The authors review the present methods available to establish the diagnosis of lesions of the renal arteries which may cause hypertension. They consider technics of surgical correction and the results of such management.

The past decade has witnessed first a decline, then a resurgence of clinical interest in the surgically correctible lesions of the kidney which cause hypertension. In the last five years, largely due to improved technics in vascular surgery and wider use of aortography, stenosis of the renal artery has become established as an important cause of hypertension. The demonstration by DeCamp and Birchall,[1] Morris, DeBakey and associates,[2] Dustan, Page and Poutasse[3] and others, that restoration of normotension could be accomplished in many hypertensive patients with obstructive disease of the renal artery by surgical relief of the stenotic lesion has resulted in a revival of interest in renal hypertension. With this renewed interest there has come better understanding of the etiology and mechanism of renal hypertension, its clinical manifestations and more accurate methods of diagnosis and treatment.

The work of Page and Corcoran[4] has suggested that a reduced arterial pulse pressure either in renal artery or in the substance of the kidney is the physiologic stimulus which initiates the renal pressor mechanism. In addition to diseases of the renal parenchyma, hypertension may be the result of stenosis of a main renal artery due to an arteriosclerotic plaque, fibromuscular hyperplasia or renal arterial aneurysm. Arteriosclerotic occlusive disease of the secondary and tertiary branches of the renal artery grading into diffuse arteriosclerotic and arteriolosclerotic changes throughout the kidney may also evoke a hypertensive response. Fibromuscular hyperplasia seems to be largely a disorder of young people, predominantly women, and according to Wylie and associates[5] presents as unilateral renal arterial stenosis in about two-thirds of the cases. In the study of patients with renal arterial stenosis made by Eyler and collaborators[6] in 1962, unilateral renal arterial plaques with no other detectible arteriographic vascular changes were the most common lesions observed.

Dampening of the pulse wave in the main renal artery and its branches or in the renal parenchyma as a result of these various causative factors is thought to stimulate the renal pressor mechanism in a manner which is not entirely understood. Since Crocker and her associates[7] and others have observed hyperplasia and increased cellular activity of the juxtaglomerular apparatus in patients with renovascular hypertension, it has been tempting to speculate that the juxtaglomerular apparatus contains a volume or pressure sensing mechanism which responds to reduced pulse pressure by liberating the substances which make up the renal pressor system and result in hypertension.

The probable constitution of the renal pressor system as suggested by Bumpus, Schwartz and Page[8] is as follows: renin, a proteolytic enzyme is released by ischemic renal tissue and acts on its substrate angio-

*From the Department of Surgery, Vanderbilt University School of Medicine, Nashville, Tenn.

Supported in part by U. S. Public Health Service Grant #HE-06647.

tensinogen, a globulin found in the liver and in the alpha$_2$-globulin fraction of plasma, to produce a decapeptide which is designated angiotensin I. A plasmatic converting enzyme splits off the last two amino acids from the apparently inert angiotensin I to produce an octapeptide called angiotensin II which is the active pressor agent.

Angiotensin II is an extremely powerful vasoconstrictive substance. It is broken down rapidly by an angiotensinase in blood to inactive peptides. Its biologic properties have been studied extensively and it appears to be well established as the active vasoconstrictive factor in renal hypertension.

Diagnosis of Renovascular Hypertension

As yet there is no readily available, clinically applicable method for direct measurement of angiotensin levels in patients suspected of having renal hypertension nor is there accurate information available concerning the incidence and the pattern of clinical manifestations of this hypertensive syndrome with its multiple pathologic causes. The clinical criteria suggested in previous years as a means of recognizing the patient with renal hypertension appear to be much too restrictive at the present time. Age, sex, family history, liability of the hypertension, response to medication, postural hypotension or its lack, a history of renal disease or renal injury or lack of such are all unreliable criteria of the presence or absence of renal hypertension. All patients with significant, persistent hypertension must be considered as potential "renal hypertensives." Ideally, all should have thorough evaluation of their hypertensive status in an effort to determine the etiology of the elevated blood pressure. Since it is economically impossible and highly impractical for physicians to attempt an exhaustive evaluation of the entire hypertensive population, a simple and effective screening program is badly needed. McDonald[9] has suggested that patients with renal hypertension are most apt to be found in the following groups: (1) the hypertensive under 30 years of age, (2) the elderly benign hypertensive who suddenly develops a malignant phase, (3) the patient with a history of abdominal or flank pain suggestive of renal involvement, (4) the hypertensive with a post-traumatic renal disorder, (5) subjects with abdominal aortic aneurysm or claudication, and (6) patients with an abdominal bruit.

Morris, DeBakey and associates[2] have expressed little enthusiasm for such arbitrary groupings as a means of selection of patients for study and have emphasized repeatedly that renal arterial stenosis which is the predominant cause of renal hypertension can best be recognized preoperatively by the performance of renal arteriograms in hypertensive patients.

At the present time it is quite clear that renal arteriography provides the most direct, practical and accurate means of identifying the patient with renal hypertension and delineating the arterial lesion which is most apt to be responsible for the problem. However, added information of great value in confirming the presence of renal ischemia is contributed by carefully done individual renal function studies. The excretory pyelogram is a valuable screening test. The I^{131} hippuran renogram and the mercury 203 Neohydrin scintigram have also been employed as screening tests. Until a practical, easily and readily done method of measurement of elevated angiotensin II activity is available, recognition of patients with renal hypertension will depend on the currently available screening tests followed by the more precise arteriographic and split function studies.

Excretory pyelograms can readily delineate the congenitally hypoplastic kidney or the small contracted kidney of chronic pyelonephritis. In cases of renal infarction a portion or all of the kidney becomes contracted and usually little or no contrast material is excreted on intravenous pyelography. According to McDonald[9] the most common cause of positive findings on intravenous pyelograms in hypertensive patients is renal artery stenosis. Delay in appearance time and decreased density of contrast medium on the affected side are commonly encountered in unilateral renal arterial stenosis. In their studies of renovascular hypertensives, Spencer, Stamey and associates[10] find the most common urographic abnormality to be that the ischemic

kidney is smaller (1.5 to 2.5 cm.) than the other kidney.

After urography the isotope renogram is a logical next step as a screening study. This is based on simultaneous external renal uptake scanning by dual balanced scintillation counters which record the time-activity rate slope of individual kidneys after intravenous infusion of I^{131} labeled ortho-iodohippurate (usually in a dose of 0.5 ug. per kg. of body weight). Studies by Winter[11] and others have defined the normal renographic patterns and their variation and have indicated that the renogram has its greatest value in diagnosing severe unilateral renal disease or ischemia. When renal functional impairment is minimal or bilateral disease is present, the renographic tracings are more difficult to interpret with accuracy.

Individual renal function studies have an important, although controversial, place in providing evidence of renal disease or impaired renal circulatory dynamics. Much controversy concerning the value of "split function" studies in the past had to do with inadequate methods of conducting the tests and errors in collection of specimens as well as in interpretation of data. Howard,[12] Stamey,[13] Birchall,[14] Rappaport,[15] and their associates have developed improved technics and revised concepts which have eliminated a good deal of the confusion which has existed concerning these tests in the past. In order to have validity the tests require meticulous atraumatic ureteral catheterization with large caliber catheters positioned so as to avoid leakage around them and very accurate urine collections.

The Howard test compares the rates of urine excretion and the sodium concentrations in the urine from each kidney. According to Howard and Connor[12] the test indicates renal ischemia if the urine excretion from a kidney is reduced 40% or more and the urinary sodium concentration is reduced at least 15%.

Stamey[13] has obtained greater accuracy in evaluation of renovascular hypertensives with the urea-inulin method of individual renal function study which he has developed. This involves the intravenous infusion of 8% urea in saline with inulin, para-aminohippuric acid and vasopressin (Pitressin). A high rate of urine flow is sought so as to obtain maximal disparity between the ischemic and nonischemic kidney in total water reabsorption. The data obtained permit comparison of the two kidneys in four ways: (1) the rate of urine flow, (2) the degree of total water reabsorption (inulin concentration), (3) renal plasma flow (PAH clearance) and (4) sodium concentration. In his application of this method of study Stamey has found that reduction of at least 66% in rate of urine flow and at least 100% increase in urinary PAH concentration, reflecting an increased total water reabsorption, usually characterize an ischemic kidney causing hypertension. Less accurate information, he believes, is obtained from the sodium data.

Renal arteriography is commonly accepted as the most valuable diagnostic study in the recognition of renovascular hypertension. Several methods of obtaining contrast angiographic demonstration of renal arteries have been described and used by physicians interested in the problem. Translumbar aortography has been widely employed for satisfactory renal arteriography.[2] Intravenous aortography has enjoyed some popularity as a method of renal angiography; in our hands it proved to be inferior to other available methods.

The method which we have found to be most valuable is percutaneous retrograde abdominal aortography. The details of this method are as follows: a No. 8 French woven Teflon catheter is inserted percutaneously in the right femoral artery by means of the Seldinger technic.[16] The catheter is advanced into the abdominal aorta and under fluoroscopic control the catheter tip is localized at the L1-L2 interspace. The renal arteries are usually found at the level of the first lumbar vertebra. We prefer to have the catheter 1 to 2 centimeters below the origin of the right renal artery; under these conditions, the contrast medium fills the renal arteries first and early filling of the superior mesenteric artery with obscuration of the origin of the renal arteries is usually avoided. A pressure injector set at 600_{psi} (Cordes) is used to inject the contrast medium. Angio-Conray is currently the preferred contrast medium; we use a dosage of 25 to 35 cc.

(0.5 cc./kg. body weight). We have utilized the Schonander film changer to obtain three or four roentgenographic exposures per second for three seconds and then an additional exposure at four, five and six seconds. Both renal arteries and their branches are clearly demonstrated on three or four early films; the late films provide demonstration of the nephrographic phase (Fig. 1). Information is obtained which may be missed with single exposure technic and artifacts sometimes encountered on a single exposure are properly elucidated.

In the last 24 months in our institution a total of 128 patients with hypertension have had aortographic study of the renal arteries. The retrograde catheter method proved feasible in 125 of the 128 patients. Absent or weak femoral pulses in the other 3 patients precluded or discouraged use of the retrograde method and in these individuals translumbar aortography was employed. Excellent radiographic results were obtained in 123 of the 125 retrograde aortograms.

Both the translumbar and retrograde methods provide the essential condition for satisfactory renal arteriography, namely that the contrast medium be delivered directly into the aorta in reasonable proximity to the renal arteries. Care must be taken to avoid delivering the entire dose of medium directly into one renal artery as this concentrated dosage can produce severe nephrotoxicity. With either the catheter or translumbar methods, we avoid using a second injection of contrast medium if the first yields unsatisfactory results (a circumstance encountered only two times in the last 128 hypertensive patients of our study). This is because of the increased hazard of renal or spinal cord injury associated with repeat injection into the abdominal aorta.[17,18] Thus, after the injection is made, the catheter or needle is immediately removed. If a second injection is required we prefer to do it another day.

There are a number of methods of obtaining satisfactory renal arteriograms. The best results are undoubtedly obtained by those who become experienced in a given method and perform it frequently and proficiently. We started using the retrograde method four and a half years ago and have used it in over 500 aortographic examinations. The combination of a catheter accurately placed in the region to be opacified, controlled pressure injection of a moderate

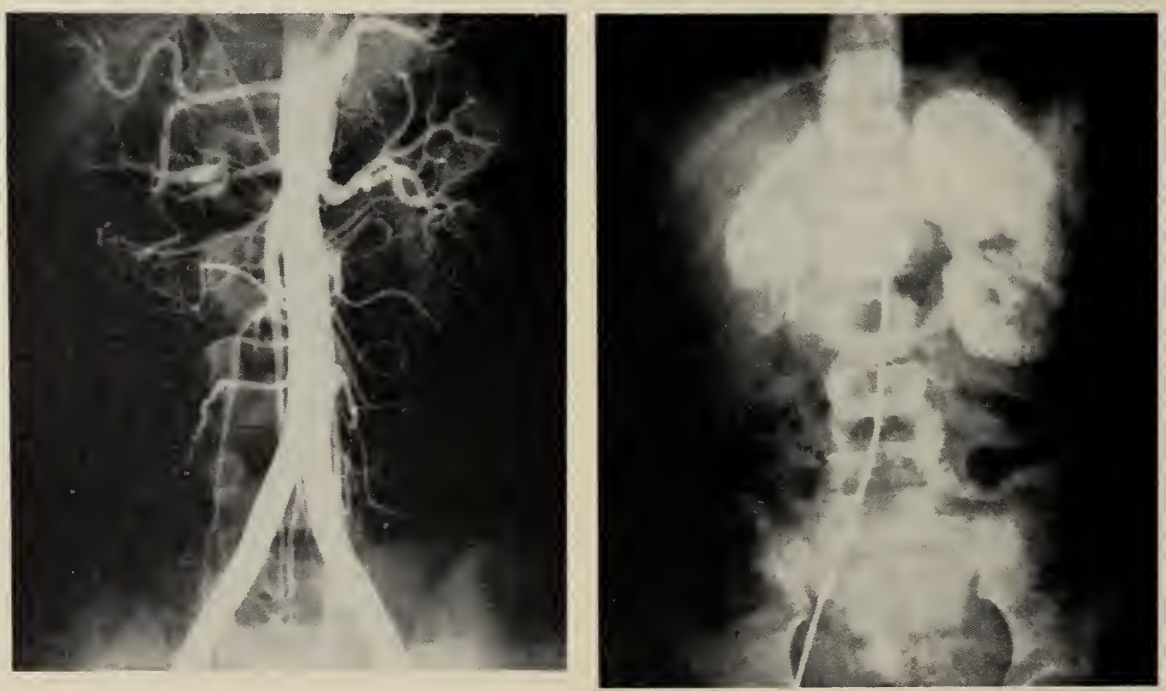


FIG. 1. Retrograde aortogram to demonstrate the renal arteries in an 18 year old woman with severe hypertension. (A) Severe stenosis of the right renal artery is indicated by the arrow. The left renal artery is larger than normal. (B) Nephrographic phase of the study shows small right kidney, hypertrophied left kidney and the level of the catheter tip.

dose of contrast medium which is both safe and satisfactory (currently AngioConray for the aorta and Conray for the peripheral vessels) and rapid serial x-ray exposures comprise an extremely efficient and safe method of arteriography.

Surgical Treatment of Renovascular Hypertension

Modern surgical treatment in patients with renal hypertension has as its aim the correction of the cause of the reduced pulse pressure in the renal arterial system with conservation of as much functioning renal tissue as possible. Nephrectomy should be considered only if reconstructive arterial surgery is impossible or has failed.

A number of surgical approaches can be used for exploration of the renal arteries in patients with established or suspected renovascular hypertension. When co-existing atheromatous disease of the abdominal aorta (aneurysm or aorto-iliac occlusive disease) is present, the long, midline, xiphoid to pubis incision which has been used for years in operations on the abdominal aorta provides optimal exposure. In recent years a supra-umbilical transverse incision has been used by many surgeons for renal arterial operations, especially when there is no evidence of coexisting aortic or iliac disease which requires attention.

At laparotomy adequate exposure of the renal arteries and adjacent aorta can be obtained in most individuals by reflecting the entire small bowel to the right and incising the posterior peritoneum over the abdominal aorta. With appropriate dissection of the surrounding retroperitoneal fatty areolar tissue, the left renal vein crossing the aorta can be displaced superiorly and the left renal artery and its origin from the aorta can be readily isolated. Exposure of the right renal artery by this approach requires regional mobilization of the inferior vena cava for several inches so the latter can be easily retracted to the right with demonstration of the right renal artery and its aortic origin.

With the abdominal aorta and both renal arteries exposed, careful inspection and palpation of each is in order to confirm the presence of lesions suggested by the preoperative studies. A biopsy of each kidney before any surgical manipulation of the renal arteries can provide valuable prognostic data. Crocker[19] has recently advocated the use of renal biopsy and frozen section study with emphasis on the activity of the juxtaglomerular apparatus as an adjuvant to proper operative management of renal hypertensives.

Measurements of pressure in the aorta and in the renal artery distal to a stenosing lesion by means of an appropriate manometric system should be done, if possible, in every instance. In the presence of an occluding atherosclerotic plaque or other severely stenosing lesion in the renal artery, varying degrees of post-stenotic dilatation are commonly present and palpable dampening of pulse pressure distal to the stenotic lesion is frequently detectable. Pressure gradients across stenotic lesions from aorta to distal renal artery have wide variation. With a severe stenosis a systolic pressure gradient of 60 to 100 millimeters of mercury or more may be recorded. There is currently no unanimity of opinion as to the critical minimal pressure gradient which is capable of triggering the renal pressor mechanism. DeBakey[20] attributes significance to as little as 5 millimeters of mercury difference in aortic and renal mean arterial pressure. Others believe a gradient from aorta to renal artery should be at least 40 millimeters of mercury to have significance.

Several methods of correction or repair of stenosis of a main renal artery have been devised. Those include thromboendarterectomy with or without a patch graft, aortico-renal arterial by-pass graft, excision of the stenotic lesion and end-to-end anastomosis, end-to-side splenorenal arterial anastomosis and excision of the stenotic lesion with graft replacement (Fig. 2). When hypertension is due to occlusion of one or more branches of the main renal artery or accompanies renal infarctions or unilateral pyelonephritis, segmental or total nephrectomy is required.

Spencer, Stamey and their associates[10] have stated that the operation of choice for renal arterial stenosis is excision of the stenotic area and end-to-end anastomosis. This procedure can be used most successfully in localized fibromuscular hyperplasia

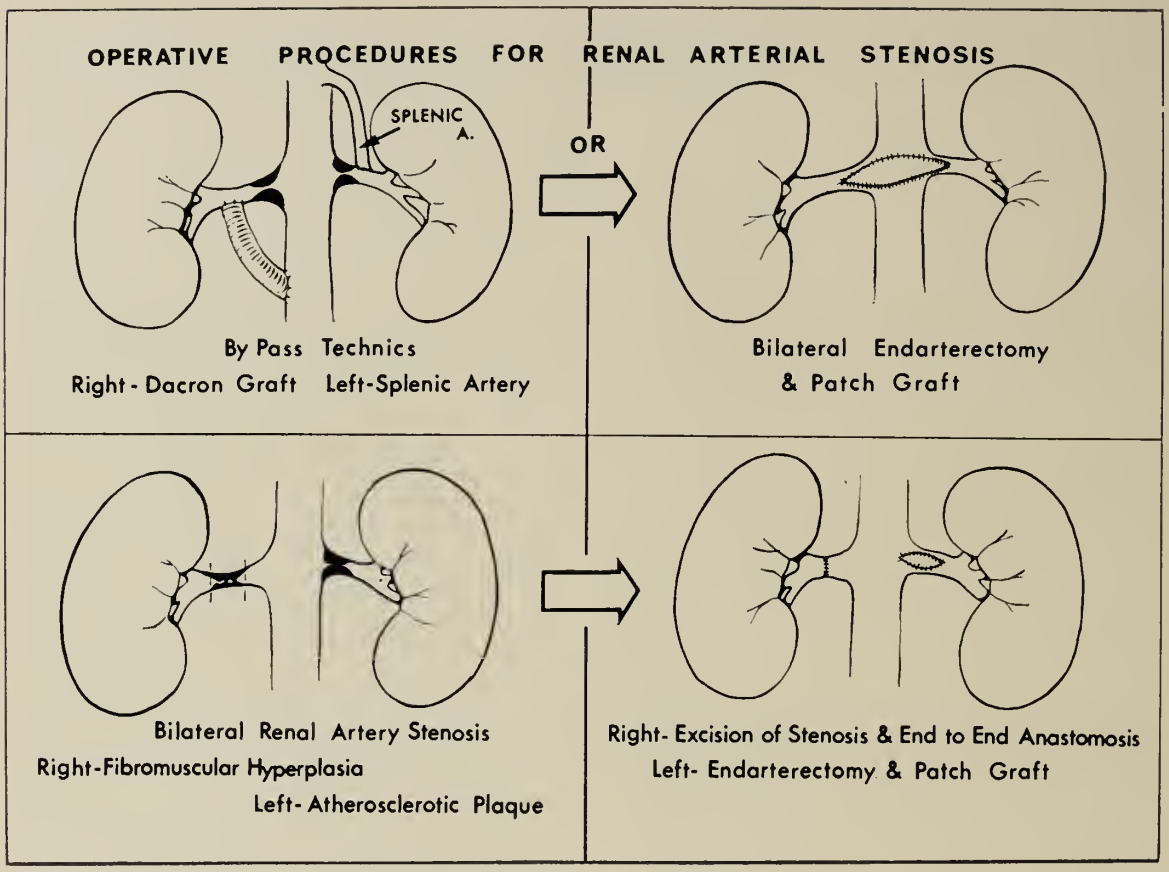


FIG. 2. The top left diagram shows how a bilateral atherosclerotic stenosis might be handled and the top right illustrates an alternative method. At the bottom left are two different lesions causing stenosis; the broken lines indicated area to be resected if resection and end-to-end anastomosis is to be done. Bottom right illustrates two possible methods of correcting renal artery stenosis.

as Wylie, Perloff and Wellington[5] have shown but is impractical in the more common atherosclerotic occlusive lesions. Splenorenal arterial anastomosis has obvious anatomic limitations but has been successfully used by DeCamp,[1] and others in the treatment of stenosis of the left renal artery. The excessive operative manipulation sometimes required and the lack of applicability to bilateral lesions limit its usefulness. Resection of a stenotic renal arterial segment and replacement by a graft, while technically feasible, is unnecessarily tedious and may require an undesirably prolonged period of renal arterial occlusion. As Morris, DeBakey, Cooley and Crawford[2] have pointed out, the principles of arterial reconstruction by, (1) endarterectomy with or without patch grafting, or (2) by use of a by-pass graft are in general better adapted for renal revascularization than are the other methods.

The stenosing atherosclerotic lesion most commonly involves the renal artery at its origin from the aorta. Adequate removal of a plaque by thromboendarterectomy in this location thus usually requires temporary isolation of the aorta by the application of appropriate vascular clamps at the origin of the renal and placing an incision in the renal artery which extends across the aorticorenal junction.

Bilateral arterial plaques can be removed simultaneously by temporarily cross-clamping the aorta, isolation of both renal arteries and the use of a transverse aortic incision which extends into each renal vessel (Fig. 2). Since the caliber of the renal artery is small and the wall thin, constriction of the arterial lumen may occur after endarterectomy if closure of the arteriotomy by simple suture is used. The technic of application of a patch of Dacron or autologous vein to the defect in the arterial wall avoids a constrictive closure and, indeed, patch grafting may be used to en-

From the Executive Director

TMA MEDICAL DIGEST

News of Interest to Doctors in Tennessee

Scientific and Planning Committee Meet With Specialty Society Representatives

● On Sunday, September 20th, the TMA Scientific Program Committee met with representatives of the specialty societies that annually conduct their sessions at the time of the Tennessee Medical Association's annual meeting. Plans were developed for the program to be held next April at the annual meeting in Chattanooga. The program is being planned with times arranged to interest attending physicians in a wide area of subjects. Recommendations have been made for guest speakers to appear presenting subjects of basic interest in medicine to all attending the meeting, in addition to the specialty society meetings. Scientific sessions will begin on Sunday, April 11th and continue through Monday and Tuesday, April 12th and 13th, 1965.

Conference Committee Deadlock Kills Medicare

● A House-Senate conference committee deadlocked on October 1 on the Medicare health bill. Defeat of the health care proposal was not unexpected. The conference committee was appointed to work out a compromise between separate Social Security bills. The Senate-passed bill included the proposal to provide health benefits for the aged under Social Security financing. While the conference committee is still subject to call, a spokesman from the committee said that he did not expect the committee to approve any bill this year. Other committee sources indicated the group could be called back to act on proposed increases in Social Security benefits.

Down But Not Out

● Congressional leaders favoring Medicare are looking to the President for help in trying to breathe new life into the administration's Medicare-tax proposal. With the majority of the conferees opposed to adding a Medicare tax plan to the heavy burdened Social Security program, already scheduled for further expansion, supporters of federally-financed medical care for all over 65 are looking to the White House for legislative guidance.

What Next

● The House passed Social Security amendments of 1964 were amended by the Senate to include a proposal styled and patterned after the King-Anderson Bill. Along with other Senate adopted amendments, the election year attractive Social Security Bill went back to the House for concurrence with the Senate version or for referral to a conference committee. At this point, it became known that the House supporters of the Gore-Anderson amendment would seek to have the House appointed conferees instructed to accept the Senate Medicare-tax plan. This resulted in the Bill being referred to the House Rules Committee for an expected rule on whether to instruct the House conferees. Representative Wilbur Mills had introduced a resolution which would refer the Senate bill to conference <u>without</u> instruction.

AMA President Dies of Stroke in Wyoming

● Norman A. Welch, M.D., Boston, popular new President of the American Medical Association, died September 3rd in Jackson, Wyoming, almost twenty-four hours after suffering a massive cerebral hemorrhage.

He graduated from Tufts' Medical School in 1926. He had been president of the Massachusetts Medical Service (Blue Shield) since 1950 and was chairman of the National Blue Shield Commission from 1955-58. In addition, he was a past-president of the Council of the New England Medical Society.

What's in the Democrat and GOP Platforms?

● The U. S. Chamber of Commerce has compiled an instant comparison of stated objectives in the 1964 platforms of the Democratic and Republican parties. All substantive material is presented for an easy side by side comparison.

DEMOCRATIC

Labor
—Consider reduction in 40-hour work week. Increase overtime pay requirements.
—Repeal Section 14 (b) of the Taft-Hartley Act—which permits states to enact right to work laws.
—Extend coverage of Fair Labor Standards Act to all workers in industries affecting interstate commerce.
—Eliminate inequitable restrictions on the right to organize and to strike and picket peaceably.
—Revise the unemployment insurance program.

Taxation
—Seek further tax reduction; remove inequities from existing tax laws; review all excise taxes and eliminate those that are obsolete.

Education
—Expand public scholarships, education loans and grants.
—Expand job training and retraining programs.
—Channel federal revenues to all levels of education.

Social Security
—Add medical care for the elderly to the Social Security program.
—Adjust Social Security benefit levels.

Farming
—Continue price supports.
—Expand food stamp, school lunch and other surplus food programs.

Urban Affairs
—Create a Department of Urban Affairs.
—Continue development, urban renewal, mass transit, open space and other programs.

Immigration
—Repeal the national origins quota system.

Poverty; Depressed Areas
—Expand the "war on poverty" concept; expedite programs within areas such as Appalachia.

Insurance
—Reopen National Service Life Insurance program for veterans.

Pollution Control
—Eliminate air and water pollution.

REPUBLICAN

Labor
—Reorganize the National Labor Relations Board.
—Broaden minimum wage provisions to encourage employers to hire teenagers.

Taxation
—Further reduce individual and corporate income tax rates; remove wartime Federal excise taxes; reform the tax structure.

Education
—Return tax resources to states to support educational objectives.
—Provide tax credits for those paying college expenses.

Social Security
—Permit higher earnings by the elderly, without loss of benefits.
—Provide tax credits and other forms of assistance to help senior citizens meet medical-hospital costs.
—Finance full coverage of medical-hospital costs for the needy elderly from the general revenues.

Farming
—Amend price support program to make participation voluntary.
—Repeal wheat certificate plan.

Reapportionment
—Enable citizens of each state to decide how their state legislature shall be apportioned.

Foreign Imports
—Erect safeguards against injuries to any domestic industries by disruptive surges of imports, as in the case of beef and other meat products, textiles, oil, glass, coal, lumber and steel.
—Require that labels of imported items clearly show their foreign origin.

Public Service

THE TENNESSEE TEN

Hadley Williams, Public Service Director

Educational Campaign Launched by AMA

● A nation-wide educational program, explaining as articulately and as persuasively as possible medicine's position on the health care for the aged issue, is now in full swing. The program is designed to inform the public on the broad range of health care now available to the elderly who cannot pay for it.

Paid newspaper advertisements, radio and television spot announcements and a special 30-minute network television program are being used in the campaign.

Tennessee is utilizing each of the state's 29 daily newspapers as well as 39 weekly newspapers to carry advertisements relative to the program.

Dr. F. J. L. Blasingame, executive vice-president of the American Medical Association, said in announcing plans for the educational campaign, "The medical profession has been seriously concerned by the results of public opinion studies showing that the majority of those interviewed did not know that every state has programs to help those who need help in paying for medical care. Our concern was deepened by testimony before committees of Congress which disclosed explicitly that certain federal agencies and their employees, instead of disseminating helpful and constructive information to the public about legislation passed to help the needy and near-needy elderly in meeting illness costs, have made public statements and written articles in which the congressional act was ridiculed, maligned and described in false generalities."

"Because of its historic responsibility for disseminating health care information to all citizens, young and old, the American Medical Association feels it has a duty to make sure all elderly people are aware of existing programs, thus be encouraged to seek medical attention when they need it," Dr. Blasingame said.

In addition to making certain that the elderly are aware of the health care programs available to them in case of need, the educational campaign will serve another significant purpose. It will inform taxpayers of the health care programs that already exist in every one of the 50 states to assist older people to meet their medical expenses where necessary.

Dr. R. H. Kampmeier, president of TMA, said in a news release issued recently in conjunction with the appearance of the ads in Tennessee newspapers, "The medical profession has undertaken this educational program because so many people are not aware that help does exist for those over 65 who need it in paying for health care, that the means of helping them is available right now in Tennessee and in every other state in the Union."

A special edition of AMA News has been mailed every physician outlining the program. TMA has revised and up-dated the "Tennessee Medical Care Programs" chart, first published last year, and has mailed every TMA member a copy for their use.

Governor Proclaims Oct. 18-24 Community Health Week

● Governor Frank Clement has issued a proclamation proclaiming October 18-24 as Community Health Week in Tennessee.

In calling health the most priceless possession of every man, woman and child, Governor Clement called upon the Tennessee Medical Association and allied health professions, civic organizations and public schools to join in its observance to demonstrate to the people of Tennessee the many health services and facilities that enrich their lives and to encourage community planning to meet their health needs of the future.

Materials have been furnished all news media in Tennessee regarding Community Health Week and several county medical societies have programs planned for observance of the week.

2nd Mental Health Congress Set by AMA

● The Second National Congress on Mental Illness and Health will be hosted by the American Medical Association on November 5-7, 1964 at the Palmer House in Chicago.

The purpose of the Congress will be to orient physicians, particularly those in private practice, and interested community leaders towards activating and participating in effective mental health programs at the community level.

This community-directed conference is a direct and logical outgrowth of the AMA's First National Congress held in October, 1962. At the First Congress, emphasis was on general, state-wide mental health programming and priorities. The Second Congress will concentrate on a theme narrower in scope but greater in depth and impact—the physician's role in mobilizing and organizing community mental health services.

Those attending the Congress will have an opportunity to participate in discussions centered around the particular needs of major metropolitan, smaller metropolitan or rural areas. Discussions to be held in workshops include: priorities and criteria to consider when establishing or expanding mental health programs; means of enlisting community support, both lay and professional; manpower problems including utilization of existing personnel, recruitment of additional personnel, use of volunteers; mechanisms available or necessary for coordination of services; psychiatric services in general hospitals; state and private psychiatric hospitals and their role in community mental health programs; the private practitioner's role in community mental health and specific facilities, including alcoholism, emergency services and aftercare, children and family, clinics and comprehensive mental health centers.

Mr. Williams, Public Service Director for TMA, has been asked to participate in the Congress as a workshop discussion leader.

Medical Aspects of Sports Conference

● Physicians acting as athletic team doctors will be interested in the AMA's Sixth National Conference on the Medical Aspects of Sports to be held in conjunction with the AMA Clinical Convention in Miami Beach, November 29, 1964.

An excellent program has been scheduled including a symposium on "The Shoulder in Sports", discussion groups on "Sports for the Teen-ager", "Environmental Considerations" and "Aquatic Sports".

Bud Wilkinson of Oklahoma is scheduled to address the conference as well as many outstanding physicians in the field. Further information may be obtained by writing the Committee on the Medical Aspects of Sports, AMA, Chicago, Illinois.

Thought for the Month

● Everything comes to him who hustles while he waits . . . Thomas Edison.

large the caliber of an artery at the site of a stenosis without accompanying endarterectomy (Fig. 2).

By-pass grafts from aorta to distal renal artery are readily applicable to the majority of occlusive lesions of the main renal artery and have many advantages. The Dacron tube is first sutured to the side of the aorta several inches below the origin of the renal arteries (Fig. 2). In suturing the distal end of the graft to the side of the renal artery beyond a stenotic lesion, only a short period of renal arterial occlusion is required. Bilateral aorticorenal arterial grafts may be readily constructed. After insertion of an aortic bifurcation graft for aneurysm or occlusive disease of the aorta, a side-arm graft may be extended from the aortic prosthesis to by-pass co-existing renal arterial stenosis on either or both sides.

Results

The results of the various surgical procedures used to relieve renal hypertension in the last five to six years have varied from clinic to clinic but have been on the whole extremely encouraging.

Our interest in studying hypertensive patients for evidence of an underlying renal arterial lesion dates back a number of years. In the beginning, selected patients (i.e., young patients, patients with hypertension of recent onset or patients with recent exacerbation of hypertension) were subjected to split renal function study (Howard Test) and occasionally aortography. In all, several dozen patients were studied, but the yield from these studies was small. About two years ago our interest in renal arterial hypertension became more intense.

During the past 24 months at Vanderbilt, a total of 128 consecutive patients with hypertension have been studied in a search for correctible causes. Every patient evaluated has had excretory pyelography and renal arteriography; most patients have also had a renogram and split renal function study. This 24 month search for patients with renal arterial hypertension revealed that 34 (or 26%) of the 128 patients had severe renal arterial stenosis. In analyzing the results of the individual diagnostic studies we found a high incidence of false positive and false negative results (10 to 15%) with the intravenous urogram and the radioactive renogram. The split renal function studies rarely yielded a false positive result but in about 10 to 15% of the patients the results were not interpretable or the test failed because of technical difficulties. The aortogram has proved to be the most accurate diagnostic study.

The variety of lesions encountered is tabulated in table 1. Twenty-three of the 34

Table 1

Variety of Renal Arterial Lesions
Vanderbilt University Hospital, 1962-64

	Number of Patients
Atherosclerotic plaque, unilateral	15
Atherosclerotic plaque, bilateral	9
Fibromuscular hyperplasia	6
Aneurysm of renal artery	2
Segmental renal infarction	2
	34

patients have thus far had laparotomy with examination of the renal arteries and measurement of the pressure in the aorta and in the renal arteries. In 4 instances there was no gradient of pressure between the aorta and the involved renal artery and the lesion was not thought responsible for the hypertension. In the other 19 cases a significant renal artery lesion was present and corrective operation was performed. The corrective operation was a by-pass graft(s) in 7 cases, thromboendarterectomy and patch graft in 7 cases, resection of aneurysm in one case, partial nephrectomy in 2 cases and nephrectomy in 2 cases.

Of the 19 patients treated surgically, 11 are completely normotensive (Figs. 3 and 4). Four patients are markedly improved, off drug therapy and asymptomatic, but still have a diastolic pressure between 90 and 100 millimeters of mercury. Three patients are unchanged. There has been one death in the series. Thus, 15 of the 19 patients treated surgically have been relieved of hypertension or received substantial benefit.

Comment

The etiology of hypertension in the majority of patients must be ascribed to the diagnostic category of "essential hypertension." There is, however, an important segment of the hypertensive population in which the hypertension is surgically correctible. Included in this group are coarc-

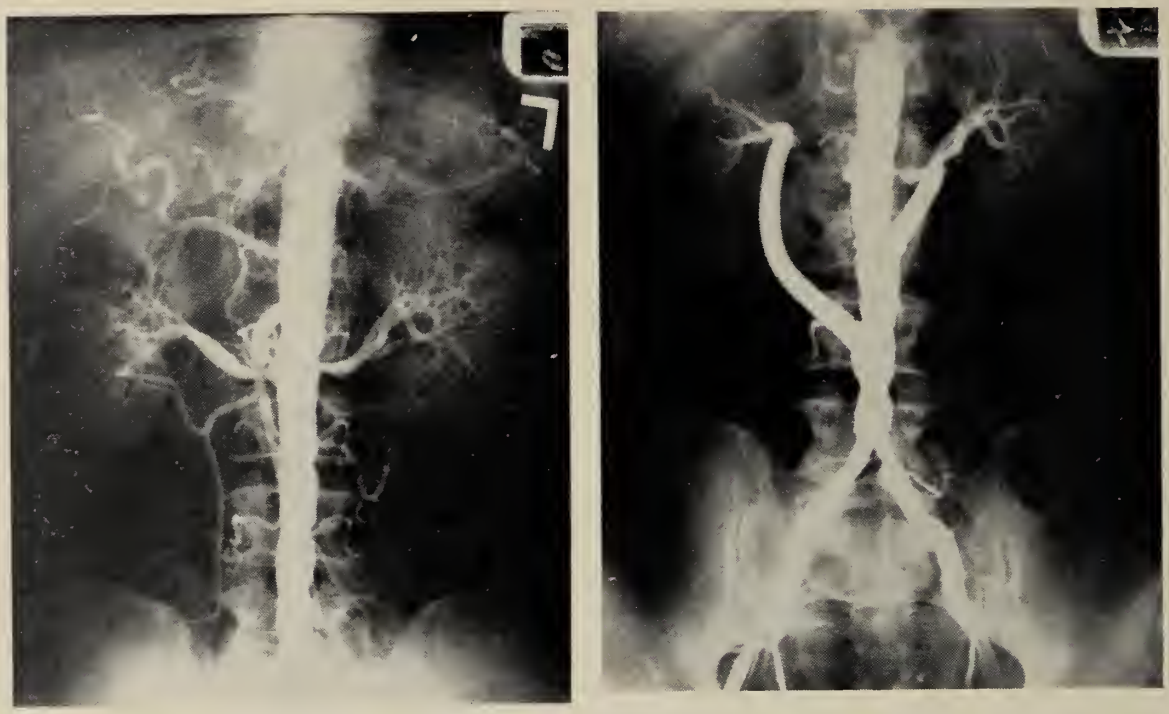


FIG. 3. (A) Aortogram showing bilateral atherosclerotic stenosis of the renal arteries in a 52 year old man with malignant hypertension. (B) Aortogram showing patent bilateral by-pass grafts; the patient is now normotensive (see Fig. 4).

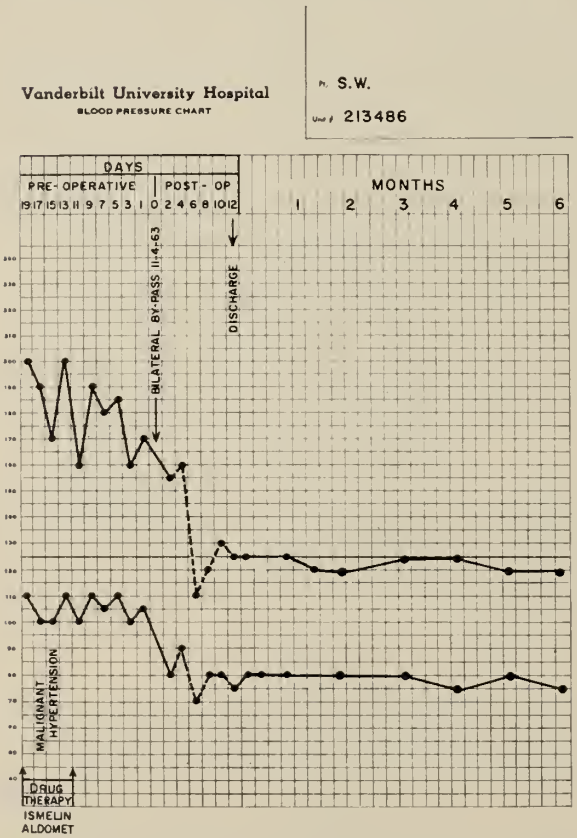


FIG. 4. Blood pressure recordings in patient in figure 3. Blood pressure fell to normal levels while the patient was in the hospital and have remained so in the ensuing 8 months.

tation of the aorta, primary aldosteronism, Cushing's syndrome, pheochromocytoma, and renovascular hypertension. Of these, renovascular hypertension is the most common.

Because of the limitations of time, practicality and economics, an exhaustively detailed screening evaluation can currently not be conducted in each hypertensive patient. However, in addition to the history, physical examination and routine laboratory studies, practical evaluation of the hypertensive patient should include measurement of blood pressure in arms and legs, a roentgenogram of the chest, an intravenous pyelogram, several determinations of serum potassium levels, measurement of 17 hydroxycorticosteroids and catecholamines or VMA in the urine, and renal arteriography. This relatively simple evaluation should help greatly in identifying for appropriate treatment those patients with surgically correctible forms of hypertension. In our experience during the last 24 months, 26% of the hypertensive patients studied proved to have severe renal arterial stenosis. The beneficial results of surgical treatment in the correctible forms of hypertension coupled with the hazards of overlooking the

curable lesions warrant a careful screening of all hypertensive patients before a nonspecific regimen of antihypertensive drug therapy is instituted.

References

1. DeCamp, P. T. and Birchall, R.: Recognition and Treatment of Renal Arterial Stenosis Associated With Hypertension, Surgery 43:134, 1958.

2. Morris, G. C., Jr., DeBakey, M. E., Cooley, D. A. and Crawford, E. S.: Surgical Treatment of Renal Hypertension, Ann. Surg. 151:854, 1960.

3. Dustan, H. P., Page, I. H. and Poutasse, E. F.: Renal Hypertension, New England J. Med. 261:647, 1959.

4. Page, I. H. and Corcoran, A. C.: Hypertension, a Review of Humoral Pathogenesis and Clinical Symptoms, Advances Int. Med. 1:183, 1942.

5. Wylie, E. J., Perloff, D. and Wellington, J. S.: Fibromuscular Hyperplasia of the Renal Arteries, Ann. Surg. 156:592, 1962.

6. Eyler, W. R., Clark, M. D., Garman, J. E., Rian, R. L., and Meininger, D. E.: Angiography of Renal Areas Including Comparative Study of Renal Arterial Stenosis in Patients With and Without Hypertension, Radiol. 78:879, 1962.

7. Crocker, D. W., Newton, R. A., Mahoney, E. M. and Harrison, J. H.: Hypertension Due to Primary Renal Ischemia: A Correlation of Juxtaglomerular Cell Counts with Clinicopathologic Findings in Twenty-five Cases, New England J. Med. 267:794, 1962.

8. Bumpus, F. M., Schwarz, H. and Page, I. H.: Synthesis and Pharmacology of the Octapeptide Angiotonin, Science 125:886, 1957.

9. McDonald, D. F.: The Diagnosis of Renal Hypertension, Geriatrics 18:589, 1963.

10. Spencer, F. C., Stamey, T. A., Bahnson, H. T. and Cohen, A.: Diagnosis and Treatment of Hypertension Due to Occlusive Disease of the Renal Artery, Ann. Surg. 154:674, 1961.

11. Winter, C. C.: Renogram and Other Radioisotope Tests in the Diagnosis of Renal Hypertension, Am. J. Surg. 107:43, 1964.

12. Howard, J. E. and Connor, T. B.: Use of Differential Renal Function Studies in the Diagnosis of Renovascular Hypertension, Am. J. Surg. 107:58, 1964.

13. Stamey, T. A., Nudelman, I. J., Good, P. H., Schwentker, F. N. and Hendricks, F.: Functional Characteristics of Renovascular Hypertension, Medicine 40:347, 1961.

14. Birchall, R., Batson, H. M., Jr. and Brannan, W.: Contribution of Differential Renal Studies to the Diagnosis of Renal Arterial Hypertension With Emphasis on the Value of the U Sodium Creatinine, Am. J. Med. 32:164, 1962.

15. Rappoport, A.: Modification of the "Howard Test" for the Detection of Renal Artery Obstruction, New England J. Med. 263:1159, 1960.

16. Seldinger, S. I.: Catheter Replacement of Needle in Percutaneous Arteriography, Acta Radiol. 39:368, 1953.

17. Killen, D. A. and Foster, J. H.: Spinal Cord Injury as a Complication of Aortography, Ann. Surg. 152:231, 1960.

18. Rhea, W. G., Jr., O'Neill, J. A., Jr., Killen, D. A. and Foster, J. H.: Toxicity of Angiographic Contrast Media: the Hazard of Repeat Injection, Suppl. Circulation 29:161, 1964.

19. Crocker, D. W.: Application of Frozen Section Technic to the Study of Primary Renal Ischemia, Am. J. Surg. 107:121, 1964.

20. DeBakey, M. E., Morris, G. C., Jr., Morgen, R. O., Crawford, E. S. and Cooley, D. A.: Lesions of the Renal Artery: Surgical Technic and Results, Am. J. Surg. 107:84, 1964.

The next witness was H. Lewis Rietz, representing the Health Insurance Institute. He said the high and increasing payroll taxes necessary to finance proposed health care benefits for the aged under the Social Security system, together with continued growth of voluntary health insurance, are strong reasons why such a program should not be adopted by Congress.

"Expressed in dollars, we are convinced that the cost of the Gore amendment, in 1966, will be at least $2.8 billion. By 1990, we are convinced the costs will reach at least $6.8 billion per year. These figures make no allowance for future benefit increases," Rietz stated. "Even more staggering are the costs inherrent in liberalizations of benefits which many advocates of these proposals view as certain once the Government benefits of this type are established." *(From the Senate Committee Hearings)*

Angiography, testing of skin temperatures and stellate block permit the selection of patients in whom sympathectomy may offer symptomatic relief.

Occlusive Arterial Lesions Of Wrist And Hand*

W. ANDREW DALE, M.D., Nashville, Tenn.

While occlusive arterial lesions of the upper extremity occur much less commonly than in the legs, diagnostic alertness permits helpful management of patients who develop finger pain and necrosis due to this. Part of the difficulty stems from confusion with other disease processes causing similar symptoms including primary Raynaud's disease and the thoracic outlet syndrome), and part is due to unfamiliarity with the favorable results of upper thoracic sympathectomy for distal arterial disease of the upper extremity.

The present group of 6 patients seen in the past two years was selected from the larger group of patients having other arm and hand syndromes not due to organic arterial occlusion.

Clinical Syndrome

While claudication usually follows arterial occlusion of arteries of the leg, it is not frequent in the upper extremity because of lack of prolonged use of the muscles, and because many of the lesions involve the arterial system at the wrist and hand distal to the large muscle mass. Changes in temperature with symptomatic coldness are commonly acknowledged, and color changes associated with this often leads to the group of signs known as Raynaud's phenomenon.

A clear distinction between primary Raynaud's disease showing Raynaud's phenomenon and the same phenomenon secondary to other processes is indicated in table 1.

Table 1

CAUSES OF RAYNAUD'S PHENOMENON

A. *Raynaud's disease*
B. *Raynaud's phenomenon* due to:
   1. Arterial occlusion (a.s., embolism, TAO, injury)
   2. Nerve lesions (thoracic outlet, causalgia)
   3. Intoxication (ergot, heavy metals)
   4. Miscellaneous (scleroderma, disseminated lupus, rheumatoid arthritis, dermatomyositis, leukemia, myeloma)

*Presented at the meeting of the Middle Tennessee Medical Association, May 21, 1964, Sewanee, Tenn.

Primary Raynaud's disease is uncommon, is usually seen in women and is most often bilateral. Experience of others[1] with large numbers of these people has led to the recommendation that patients not be classified as primary until all studies have been accomplished and a considerable period of time (approximately two years) of careful follow-up has occurred. De Takats[2] points out that as careful follow-up continues over a period of time, more and more of such patients are found to have another primary cause which allows differentiation from Raynaud's disease.

Finally, should be recognized the common occurrence of small areas of skin gangrene and the failure of minor wounds to heal. This has often led to incorrect management under the mistaken diagnosis of a retained foreign body or of osteomyelitis of the underlying bone without recognition of the vascular insufficiency which is the actual cause of necrosis and failure of healing.

Table 2 summarizes the common characteristics of occlusive arterial lesions of the arm and hand.

Table 2

CHARACTERISTICS OF ARM AND HAND LESIONS

Claudication—uncommon
Night pain—less common
Gangrene—common in finger skin
Site of block—subclavian, palmar arches, digital arteries

The reason why night pain in the fingers is less common than in lesions of the lower extremity is not clear but this proved to be characteristic of these patients. Some of the differential diagnostic characteristics between organic occlusion of small vessels and other diseases causing pain in the hands and fingers are summarized in table 3.

Table 3

DIFFERENTIAL DIAGNOSIS OF SYMPTOMS OF THE HAND AND FINGER

Raynaud's "disease": usually female, episodic, bilateral, minimal or no gangrene, absence of pri-

mary cause, long duration, triggered by cold and emotion.

Acrocyanosis: painless cyanosis of tips of appendages

Reflex sympathetic dystrophy (causalgia): posttraumatic, decreased motion of joints, skin atrophy.

Thoracic outlet syndrome (tight muscles, fascia or spaces at root of neck): nerve signs usual, vascular signs occasional.

Atherosclerotic thrombosis: one side worse, arterial compression sign positive, skin gangrene usual, finger tip (or side) gangrene, minimal cyanosis.

Diagnostic Studies

The diagnostic studies listed in table 4

Table 4

DIAGNOSTIC STUDIES

1. Test wrist arteries by occlusion and exercise
2. Skin temperature study with stellate block
3. Angiogram: percutaneous brachial route

are of particular importance in determining the exact situation. The tissues of the hand and fingers are supplied by both radial and ulnar arteries through the deep as well as the superficial palmar arterial arches. Blood then flows on into the fingers via the paired digital arteries. Figure 1 shows the arteriogram of a normal hand and its fingers and is useful for purposes of comparison. The *role of the radial and of the ulnar arteries* may be assessed in turn by blocking both vessels firmly by finger pressure while the patient vigorously closes and opens the fist five times. The pressure is then released from the radial artery and it is noted whether rapid flushing of the hand and finger occurs or whether there is delay)due to occlusion of some portion of this vessel). The same simultaneous occlusion with exercise is then followed by release of the ulnar artery to make a similar determination. This is a useful clinical test to determine quickly whether one or both of these vessels are occluded.

The effect of *stellate block* upon skin temperature indicates whether release of vaso-



FIG. 1. Arteriogram using 50% Hypaque shows normal ulnar and radial arteries with palmar arches and digital vessels. (Other films in the series delineated the more distal vessels with greater clarity.)

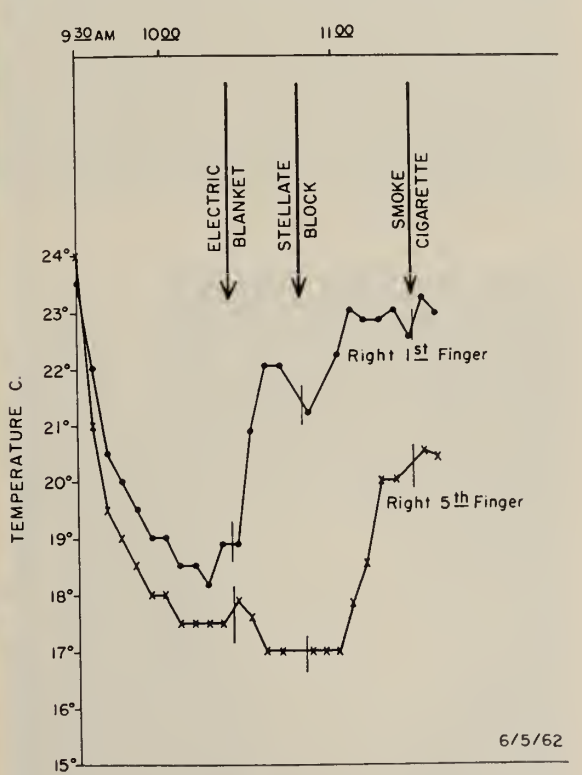


FIG. 2. Finger skin temperature studies of Case 4 in constant temperature room. Following stabilization, electric blanket vasodilatation produced index finger temperature increase without change in the 5th finger. Stellate block then produced release of vasoconstriction of the 5th finger with increase in temperature. Smoking did not affect this.

constriction will permit increased blood flow through the distal fingers as indicated by a rise in skin temperature. The patient is placed in a constant temperature, constant humidity room and allowed to remain without clothing until the finger temperatures fall to a constant reading. In figure 2 this occurred at 10:20 a.m. At that time, an electric blanket was placed over the patient while the upper extremities remained exposed and it was noted that the index finger skin began to increase in temperature while the fifth finger did not. Stellate block, using 10 cc. of 1% lidocaine (Xylocaine), was placed by the anterior approach at 10:50 o'clock and immediately resulted in an increase in skin temperature. This excellent response to both reflex vasodilatation and to release of vasoconstriction by stellate block predicted a good response to upper thoracic sympathectomy which occurred when the operation was performed shortly thereafter (Case 4).

Angiography is performed by injecting 20 cc. of radiopaque material into the brachial artery via the percutaneous approach at the antecubital space. A series of films is exposed at one second intervals. Figure 1 indicates a normal arteriogram while figures 3, 4, and 5 indicate various degrees of organic occlusion.



FIG. 3. (Case 1.) Arteriogram shows absence of superficial palmar arch and digital arterial blocks. Insert indicates skin necrosis of the 5th finger whose vessels are missing entirely.

While it might be supposed that *biopsies* of the fingertips or examination of amputated extremities would be helpful in determining the pathologic change, this is not always true. One specimen of an amputated finger showed normal vessels (Case 4). The other showed hyperplastic endarteritis of arterioles with luminal obliteration in some (Case 5, Fig. 6). Whether the appearance of thromboangiitis obliterans in this case indicates that these lesions are usually instances of Buerger's disease is not clear.[3] A good case can be made for the other viewpoint in this controversy, that Buerger's disease is a useful clinical category but that the actual lesions are variations of the arteriosclerotic process.

Treatment

Protection of the fingers from exposure to cold by suitable covering and protection from trauma at work by suitable gloves have ordinarily been attempted by the patient before seeking medical aid. While *vasodilating drugs* such as mylidrin (Arlidin) and tolazoline (Priscoline) may be of some benefit, their continued use usually causes unpleasant side reactions and their efficacy is considerably less than that of sympathectomy.

The results of *upper thoracic sympathectomy* have been considerably improved since the use of angiography to differentiate these patients from others whom sympathectomy could not be expected to help, and since the use of stellate block to aid in the prediction of a good result. Indeed, the results in this small group of individuals has been considerably more promising than results in the much larger experience with lumbar sympathectomy used in the presence of organic, occlusive disease of the legs.

While there was in the past considerable emphasis on performance of a post-ganglionic sympathectomy, it now appears that such is no better than complete removal of the ganglionated chain and the modern operation contemplates extirpation of the lower portion of the stellate ganglion through the fifth thoracic ganglion.

At least four surgical approaches as well as several modifications of these have been used and these are outlined in table 5. The



FIG. 4. (Case 2.) Early film of series (on right) visualizes radial artery and portion of deep palmar arch. Later film (on left) visualizes more distal vessels with multiple blocks at arrows as well as other points. Insert shows skin necrosis of fingertip.

Table 5

SURGICAL APPROACHES FOR THORACIC SYMPATHECTOMY

Cervical—does not allow easy removal of chain below T-3
Posterior—requires painful rib resection; chain resection limited
Axillary—deep but acceptable
Anterior—deep but acceptable

older cervical approach did not permit the distal resection of the chain to a low enough point to denervate the upper extremity well and resulted in a high incidence of Horner's syndrome by virtue of damage to the stellate ganglion. The approach by posterior rib resection again permitted only a limited removal of the sympathetic chain. Both the axillary and anterior thoracic approaches are acceptable ones. The patients in this series have all been operated upon via an anterior approach through the third anterior interspace cutting the second costal artilage when necessary for exposure. Although this develops a fairly deep approach to the ganglionated chain, it does permit its removal with an extremely low incidence of Horner's syndrome if the technic of Palumbo[4] is followed. The rapidity of healing, decreased pain and early return to work are great advantages of the anterior thoracic approach.

Since many of these patients smoke, they require explanation of why such appears to be harmful to patients having any element of vasospasm in either fingers or toes.

Case Summaries

In table 6 are summarized the 6 instances of symptomatic organic occlusion of vessels of the wrist and hand which have been seen in the last two years. Patients with other disease processes are omitted here.

Five of the 6 patients seen with lesions



FIG. 5. (Case 5.) Arteriogram shows blocked radial artery at arrow with absence of ulnar artery; blood flow occurs chiefly via interosseous artery.

of the wrist and hand vessels have undergone thoracic sympathectomy, 4 unilaterally and one bilaterally. A patient with severe heart disease and angina was advised to use Arlidin rather than be operated upon because of the cardiac condition. One patient had previously had bilateral thoracic sympathectomies and simply required amputation of portions of the fingers. Healing then occurred. All patients have completed healing although 2 required amputation of portions of the fingers. No Horner's syndrome occurred.

Summary and Conclusions

The similarity of the clinical syndrome of coldness of fingers, pain and minor degrees of skin necrosis, associated with multiple areas of occlusive disease of the distal arteries of the wrist and hand, in this group of 6 patients seen within the last two years, suggests that other such patients exist. The combination of clinical testing of the wrist arteries with studies of finger skin temperature following stellate nerve block and definitive angiography allows a great degree of diagnostic accuracy which has only become available recently. The good response to upper thoracic sympathectomy which can be performed with low risk and morbidity suggests the need for diagnostic alertness to permit proper management of such individuals.

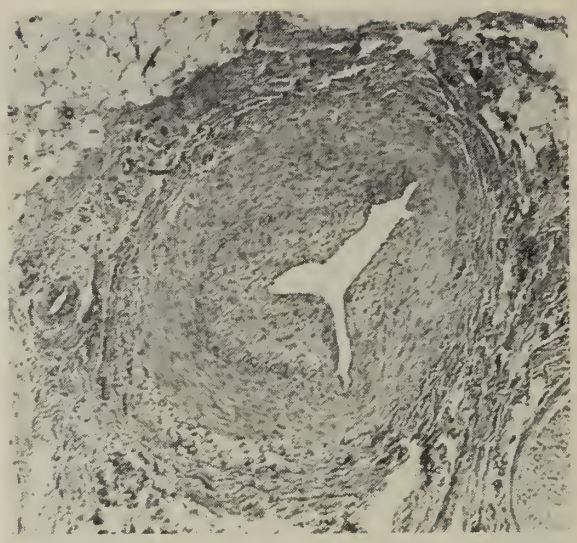


FIG. 6. (Case 5.) Arteriole from amputated digit shows hyperplastic endarteritis with extreme narrowing of lumen. Other arterioles were completely obliterated.

References

1. Allen, Edgar V., Barker, Nelson W., Hines, Edgar A. Jr.: Peripheral Vascular Diseases. Philadelphia. W. B. Saunders Company, 1962.

2. De Takats, Geza: Vascular Surgery. Philadelphia. W. B. Saunders Company, 1959.

3. Abramson, David I.: Thromboangiitis Obliterans (Buerger's Disease), Heart Bull. 13:48, 1964.

4. Palumbo, Louis T.: New Surgical Approach for Upper Thoracic Sympathectomy, A.M.A. Arch. Surg. 76:807, 1958.

Table 6

SUMMARY OF SIX CASES OF ORGANIC ARTERIAL OCCLUSION OF THE WRIST AND HAND

Patient	*Lesion*	*Finger Necrosis*	*Treatment*	*Time*
69 yrs./F	Palmar arch, radial	5th	Arlidin	4 mos.
48 yrs./M	Palmar arch, ulnar	4th	Sympathectomy	1 mo.
39 yrs./M	Radial, ulnar	3, 4	Sympathectomy	8 mos.
40 yrs./F	Radial, ulnar	5th	Sympathectomy	7 mos.
30 yrs./M	Radial, ulnar	Multiple	Sympathectomy & amputation	18 mos.
59 yrs./M	No arteriogram	Multiple	Amputation	8 mos.

CASE REPORT

Cancer Following "Healed" Gastric Ulcer*

Clarence B. C. Marsh, M.D., Chattanooga, Tenn., and Elmer W. Heffernon, M.D., Boston, Mass.

The question of whether or not malignant change may occur in a benign gastric ulcer has been hotly debated for the past six decades. Arguments in favor of this possibility have been based on clinical evidence of changes in symptoms and statistics which show a higher incidence of gastric cancer in persons known to have had gastric ulcer. Wilson and McCarty,[1] in 1909, reported a series of 153 cases of gastric carcinoma in which 71% showed histologic evidence of previous ulcer. Many pathologists disagreed with these findings, the most notable being Aschoff, who thought that the cancers themselves became ulcerated. It has generally been agreed that ulceration can occur in gastric cancer. Wilensky and Thalhimer[2] thought that in this process of ulceration the lesion could be digested almost completely, and that the small fragments of tumor remaining in the periphery erroneously suggested that the neoplasm had developed in an ulcer. Furthermore, these small fragments may be difficult to distinguish from non-neoplastic epithelial hyperplasia at the margin of many benign ulcers, thus adding to the confusion. Crohn,[3] in 1927, collected from the literature 346 cases of gastric ulcer which had been followed medically for prolonged periods. In this group the mortality rate from cancer was only 1.2%, which is a lower mortality rate for gastric cancer than that of the general population. Brown,[4] in 1930, reviewed 77 cases of gastric ulcers observed for 15 years by Sippy and Brown and reported only one death from carcinoma. Necropsy showed that the lesion had originated some distance from the scar of the previous ulcer in the stomach. Many additional reports are mentioned in Bockus'[5] 1963 edition of Gastroenterology supporting the premise that malignant change in a gastric ulcer is rare, probably in less than 1.5 per cent. A similar report was published by Brown[6] who found that of 520 cases of proved gastric carcinoma, only 1.5% arose from a preexisting ulcer. The idea that such neoplasms may have shown this relationship at an earlier stage in their development before the patients came to operation was advanced by Morgan and Lee.[7] They thought that ulcer-cancer is a definite entity, occurring in at least 1% of patients who have chronic gastric ulcers. They thought that the actual incidence was higher, but an accurate figure could not be arrived at because the relationship could be detected only in the very early stages of malignant degeneration.

Although there is considerable evidence in support of the belief that malignant transformation in a gastric ulcer is rare, the possibility still remains that a number of cases do undergo this change. This possibility still needs confirmation. The following report seems of interest in view of the pros and cons in the preceding discussion.

Report of a Case

A 63 year old white man first came to the Lahey Clinic in September 1958 because of burning right flank pain which extended to the back, and occurred one hour after eating spicy foods. The pain was relieved by antacids or food, but would also disappear spontaneously in 1 to 1½ hours. Just before his initial visit, nausea and vomiting of watery material developed. He had been hesitant to eat and had lost "some weight." He also complained of dysuria, frequency of urination, and straining upon urination.

On *physical examination* deep tenderness was elicited in the epigastrium and moderate benign prostatic hypertrophy was present. Roentgenologic examination of the upper gastrointestinal tract revealed a gastric ulcer crater, 5 mm. deep and 1 cm. in diameter, on the lesser curvature. A Papanicolaou smear of aspirated gastric contents was reported as Class 1, no tumor cells found. Gastric analysis after an Ewald meal demonstrated absence of free hydrochloric acid and 8 units of total acid. Gastric analysis after administration of histamine was not done. Gastroscopy revealed a large gastric ulcer, thought to be benign, on the posterior wall with clean margins; aside from the edema of the surrounding mucosa, there was no evidence of infiltration. An associated antral gastritis with scarring and deformity of the angulus of the stomach was found. The Hgb. was 14.6 Gm. The patient was hospitalized and placed upon a Sippy ulcer type of regimen, including antacid neutralization. Sedatives and antispasmodics were also used.

An upper gastrointestinal x-ray series was repeated 17 days after the first examination and

*From the Department of Gastroenterology, Lahey Clinic, Boston, Mass.

12 days after treatment was begun. The crater was then found to be 5 mm. across at the base and 2 mm. in depth, with extension to the mucosal folds. The area was flexible on palpation, and the lesion was thought to be a healing benign gastric ulcer.

The patient was discharged with instructions to follow a strict ulcer regimen, with colloidal gel antacid eight to ten times daily. When he returned to the clinic 3 weeks later he was asymptomatic. Roentgenologic study of the stomach was repeated and revealed a small dimpled area, corresponding to the previous site of the ulcer, indicating continued healing of the lesion.

The patient gained 15 pounds in 2 months. A fourth upper gastrointestinal x-ray series revealed a tiny (5 mm.) residual ulcer crater. Within 3 months he had gained 22 pounds and had remained asymptomatic while doing light work. An upper gastrointestinal x-ray series failed to reveal any evidence of a gastric ulcer. In March 1959, 6 months after his first visit, he was still asymptomatic on a convalescent type of ulcer regimen.

One year after the initial visit the patient was permitted to take a somewhat liberalized diet and antacids as needed. An x-ray series of the upper gastrointestinal tract again did not reveal any abnormality except for a diverticulum that arose from the medial aspect of the descending duodenum.

The patient returned to the clinic in June 1963, 4 years and 9 months after his initial visit. He had had a "cold" in the spring of 1963 and thereafter a "sour stomach," heartburn, vomiting, anorexia, weight loss of 20 pounds, diarrhea with dark stools, exertional dyspnea, and weakness. Physical examination revealed a tender, smooth, epigastric mass, prominent distention of neck veins when reclining, and increase of the anteroposterior diameter of the chest. The Hgb. was 5.1 Gm., PCV. reading 21%, E.S.R. 46 mm. per hour, and the BUN. value was 22 mg. per 100 ml. An x-ray series of the upper gastrointestinal tract revealed a foreshortened stomach, and tubular narrowing of the distal two-thirds with diffuse mucosal distortion and stiffening. These changes were characteristic of scirrhous carcinoma of the stomach.

At laparotomy, on June 7, 1963, a mass was found which occupied all of the lesser curvature of the stomach to the pylorus. The greater omentum and gastrohepatic ligament were involved in the mass. A biopsy specimen taken from an omental lymph node was reported by the pathologist as showing metastatic carcinoma simplex. No definitive surgical procedure was carried out except laparotomy and lymph node biopsy.

Comment. This is not a unique case. Cain and associates[8] reported 34 cases of cancer in 414 patients who were thought to have benign ulcers and 11 of these occurred five or more years after a diagnosis of benign ulcer was made. Smith and Jordan[9] reported that of 111 patients thought to have benign ulcer and followed from 5 to 23 years, only 2 had recurrences with gastric carcinoma.

There remains the question of whether or not benign gastric ulcers may undergo malignant change. Considerable evidence favors its occurrence in at least a small percentage of cases. The exact number of such cases and the significance of its occurrence in the management of gastric ulcers need further clarification.

References

1. Wilson, L. B. and McCarty, W. C.: The Pathologic Relationships of Gastric Ulcer and Gastric Carcinoma, Am.J.M.Sc. 138:846, 1909.

2. Wilensky, A. A. and Thalhimer, N.: The Etiological Relationship of Benign Ulcer to Carcinoma of the Stomach, Ann. Surg. 67:215, 1918.

3. Crohn, B.B.: Affections of the Stomach. Philadelphia, W. B. Saunders Company, 1927, p. 668.

4. Brown, R. C.: The Results of the Medical Treatment of Peptic Ulcer, J.A.M.A. 95:1144, 1930.

5. Bockus, H. L.: Gastroenterology. Philadelphia, W. B. Saunders Company, 1963, p. 509.

6. Brown, C. H.: Benign Ulcer and Carcinoma of Stomach, J. Am. Geriatrics Soc. 1:177, 1953.

7. Morgan, A. D. and Lee, E. S.: Incidence of Ulcer-cancer, Brit. J. Surg. 41:595, 1954.

8. Cain, J. C., Jordan, G. L., Jr., Comfort, M. W. and Gray, H. K.: Medically Treated Small Gastric Ulcer; 5 Year Follow-up Study of 414 Patients, J.A.M.A. 150:781, 1952.

9. Smith, F. H. and Jordan, S. M.: Gastric Ulcer: Study of 600 Cases, Gastroenterology 11:575, 1948.

CASE REPORT

Biliary Fistula Secondary to a .22 Bullet Wound

Joe F. Bryant, M.D.,* Lebanon, Tenn.

A 17 year old white boy was admitted to the McFarland Hospital on Dec. 4, 1963, approximately one hour after receiving a .22 rifle wound in the right upper quadrant. The patient was in acute distress.

Physical examination revealed a B.P. of 98/60, P. 132, and R. 26. The heart and lungs were clear. The abdomen was extremely tender with a wound of entrance in the right upper quadrant in the mid-clavicular line just below the rib cage. Rectal examination was negative. The Hgb. was 12.7 Gm. and WBC. count 15,100.

The patient was immediately taken to the operating room and under nitrous oxide and ether anesthesia, a right pararectus incision was made. Upon entering the peritoneum approximately 1,000 cc. of blood was seen. There was a through and through laceration of the right lobe of the liver and what was thought to be a laceration of the cystic bile duct. A large hematoma was present in the retroperitoneal area which on exploration revealed a hole in the vena cava. There was a loss of approximately 800 cc. of blood from the perforation in the vena cava which was sutured with 3-0 arterial silk. The laceration which was thought to be in the cystic duct was sutured with three chromic sutures. The laceration of the liver was packed with Surgicel and sutured. Two drains were brought out through a stab wound in the right upper quadrant. A routine closure was carried out.

The patient was given 3 units of blood while on the operating table; though the B.P. during the procedure varied from 0 to 80/50, at the end of the closure he became normotensive. Postoperatively he did well except that he continued to drain bile through the stab wound in the right upper quadrant. Over a period of 17 days he drained 500 to 800 cc. of bile daily. Each stool was examined closely and appeared to contain bile.

I saw the patient for the first time on the 6th postoperative day. An attempt to thread a catheter into the biliary fistula was unsuccessful and an I.V. cholangiogram did not visualize the common duct. A Foley catheter was inserted through the fistulous tract and the bulb inflated. This acted as a collecting tube and prevented spillage of bile over the abdomen. As an attempt to close the fistula the catheter was clamped intermittently to produce pressure, but this was unsuccessful.

Because of his good general condition, the patient was discharged on the 17th postoperative day with the decision to admit him in one week and close the biliary fistula if it did not close spontaneously. He was readmitted 48 hours after discharge with a T. of 101.2°, complaining of aching "all over" and of being nauseated though he had not vomited.

Physical examination did not reveal any jaundice and was otherwise negative except for the biliary fistula. The WBC. count was 11,000 with a normal differential picture and the Hgb. was 7.5 Gm. The urine was negative and contained a large amount of bile.

He was treated with intravenous fluids and antibiotics and the fever subsided. The abdomen was explored again on the 7th hospital day through the old right paramedian incision. There was a biliary fistulous tract. Because of the dense adhesions, the gallbladder was removed in a retrograde manner identifying the junction of the cystic and common ducts. On dissection it was found that the common hepatic duct had been severed at its junction with the left and right hepatic ducts as shown in figure 1. During the dissection I was never able to identify any remnant connecting the left and right hepatic ducts and the common hepatic duct. The lumen of the hepatic duct was extremely small and because of the differential caliber of the left and right hepatic ducts and the common hepatic duct, a Roux-en-Y anastomosis was carried out as shown in figure 2. The left and right hepatic ducts were sutured to the mucosa of the bowel with interrupted 3-0 plain catgut and a seromuscular layer was sutured to the hilum of the

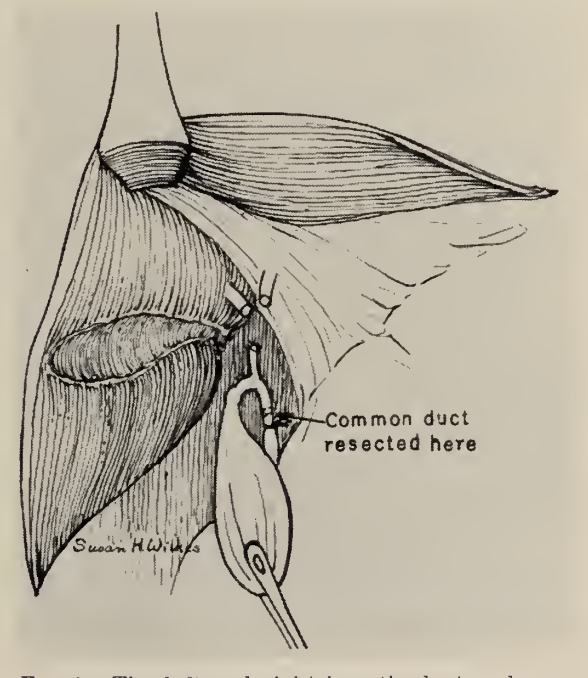


FIG. 1. The left and right hepatic duct and common hepatic duct was severed. The cut illustrates where common duct and gallbladder was resected.

*From the McFarland Hospital, Lebanon, Tenn.

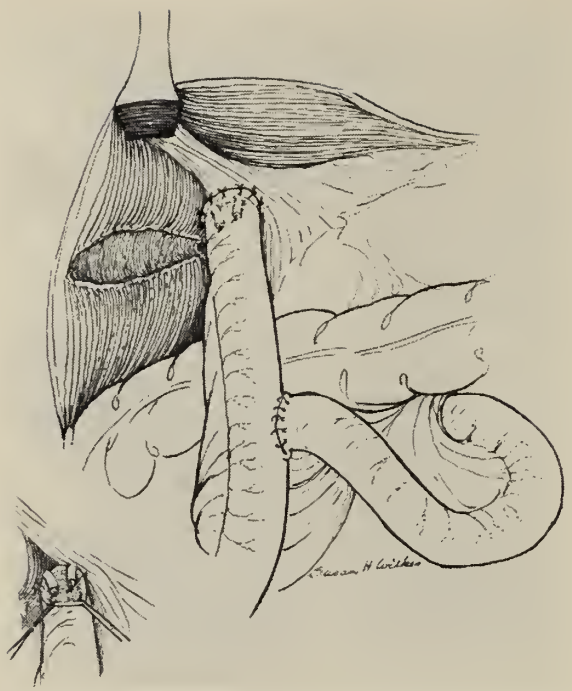


FIG. 2. Shows Roux-en-Y anastomosis. Lower drawing shows how the left and right hepatic ducts were sutured to the mucosa.

liver producing a satisfactory closure. The distal end of the common duct was ligated with 2-0 silk and the gallbladder and duct excised. An end-to-side anastomosis of the bowel was carried out with an inner layer of running 3-0 chromic and an outer layer of interrupted 3-0 silk. Two drains were brought out through a stab wound in the right upper quadrant and a routine closure carried out.

The patient had an uneventful postoperative course and was discharged on the 8th postoperative day. He was seen in the office one month later and was asymptomatic.

Discussion

This presents a very interesting case of a biliary fistula due to a missed laceration of the common hepatic duct which was satisfactorily handled with a Roux-en-Y anastomosis. One wonders how the patient continued to have normal stools with a severed duct. It is my impression that there was pooling of bile around the hepatic duct due to the scar tissue which produced some drainage through the duct into the bowel.

Senator Long (La.) told Roy D. Simon of the National Association of Life Underwriters that King-Anderson would be just a starting point, a foot in the door. Simon said that has been the history of other social legislation of this type. Long said King-Anderson pays for an old man in the hospital for two weeks but nothing for a younger man who is in the hospital for a year. Long said Social Security is one of the most regressive taxes ever levied.

Long said that in the future Social Security taxes with a King-Anderson program could go up to 15 or 20% of payroll, with perhaps a 20% Federal income tax levy, and various state and local taxes that would mean wage earners would be paying half their earnings in taxes. They would never be able to save for themselves to purchase houses or insurance, he remarked.

Taking tax money from those who can't afford to pay it to provide a service for someone who can afford it does not square with my idea of social justice, said Long. *(From the Senate Committee Hearings)*

CLINICOPATHOLOGIC CONFERENCE

V.A. Administration Medical Teaching Group Hospital

Suprasellar Epidermoid Cyst

Present Illness. This 63 year old white man was first admitted to another hospital 5 days before his transfer here.

On admission to that hospital he was semicomatose and the history was obtained from his wife. This dated back at least 33 years when the patient was diagnosed as having a meningitis of unknown etiology, which was thought possibly to be on a tuberculous basis since the patient at that time had arrested tuberculosis. Since then the patient had intermittent episodes of unconsciousness, occurring at 5 to 8 year intervals, and relieved by spinal puncture and removal of fluid. In the past few years these episodes had become much more frequent and the periods of unconsciousness lasted longer. In the 3 months before admission he gradually became somewhat disoriented and was unable to walk well. These symptoms progressed until the patient became semicomatose shortly before admission.

At that time he was afebrile. There was slight stiffness of the neck; the extremities were spastic, more so on the left, and a equivocal Babinski sign was present bilaterally. The B.P. was 150/84. Lumbar puncture revealed an opening pressure of 350 mm. and a closing pressure of 240 mm. Cell count was 5 lymphocytes, Pandy 1+, sugar 77 mg. and total protein 50 mg.%, with chlorides 116.3 mEq/L. There was no relief of symptoms after this procedure. His general condition remained unchanged for the next 4 days. He then developed deepening coma and the T. rose to 103°. A tracheotomy was done because of difficulty with respiration. He was placed on large doses of antibiotics and shortly thereafter was transferred to this hospital.

Examination. B.P. was 80 systolic, no diastolic pressure discernible; P. 160 and T. 101.6. The patient was an elderly white man who was semicomatose and in a shock-like state. He was aphasic and responded only to painful stimuli by moving his extremities. His respirations were shallow and the skin was cold and clammy. A tracheotomy tube was in place and the air exchange good. There was a dilated right pupil as compared with the left; both pupils reacted to light. Retinoscopic examination showed marked bilateral papilledema; the extra-ocular movements were grossly intact. There were slightly hyperactive deep tendon reflexes in the lower extremities, more marked on the left. The upper extremity reflexes appeared normal and equal. There was a positive Babinski reaction on the left. Superficial reflexes were absent; corneal reflexes were present. There was definite nuchal rigidity.

Laboratory Data. RBC. count was 5,700,000, Hgb. 15.5 Gm., WBC. count 29,200, with PMN. 92%, lymphocytes 7%, monocytes 1%. PCV. was 50%. BUN. was 135 mg. per 100 ml., CO_2 24 and chlorides 122 mEq/L. STS was negative. Urine showed a reaction of 7.5, sp. gr. 1.014, albumen, a trace. Spinal fluid obtained by ventricular puncture showed 640 RBC., 2% crenated and 12 polys.; globulin was positive to a trace; total protein 19 mg. and sugar 114 mg.%, chlorides 136 mEq/L. Serologic test for syphilis and colloidal gold curve were both negative. Two days after admission the BUN. was 168 mg.%, bicarbonate 18, potassium 3.8 and chlorides 108 mEq/L. EKG. revealed a sinus tachycardia.

X-ray. Skull showed no bone defects and the sella turcica was normal, with no abnormal calcifications. The heart was negative and lung fields relatively clear. Right carotid arteriogram revealed good contrast visualization of the internal carotid and its intracranial branches, without deplacement across the midline. The lateral view showed distinct stretching out of the anterior cerebral artery consistent with enlarged lateral ventricles. A ventriculogram demonstrated the lateral ventricles to be markedly dilated. There was a small amount of subdural air. The 3rd and 4th ventricles and the aqueduct were not identified. The brow-up lateral showed a suggestive filling defect in the posterior aspect of the region of the third ventricle.

Hospital Course. On admission the patient was placed on massive doses of antibiotics, Urevert and I.V. fluids. He was digitalized and given Solu-Cortef. Levophed was also started and he maintained an adequate blood pressure until the day of his death. Throughout his hospital stay the T. ranged between 101 and 103.4°. Following the ventriculogram on the 2nd day he seemed slightly improved for a short time, but thereafter his course was progressively downward, with deepening coma. On the 3rd hospital day he became cyanotic, the B.P. became unobtainable and he died.

Clinical Discussion

DR. LEFKOVITS: Since we are dealing with a patient who had hydrocephalus I thought it might be worthwhile to review the anatomic features of hydrocephalus which are pertinent to this case.

The lateral ventricles, the foramen of Monro, by which the lateral ventricles communicate with the 3rd ventricle, the 3rd ventricle, the aqueduct of Sylvius, the 4th ventricle, the foramen of Magendie and Luschka and the central canal of the spinal

*From the Medical Service and Laboratory Service of the Veterans Administration Medical Teaching Group Hospital, Memphis, Tenn.

cord comprise the internal cerebrospinal fluid system. In addition to this system there is the external cerebrospinal fluid system between the pia and the arachnoid membrane surrounding the entire spinal cord and the brain. This system comprises the subarachnoid space, cisterns, perivascular and perineural spaces, and includes the pouch or cavity between the termination of the spinal cord at the level of the 1st lumbar vertebra and the 2nd sacral vertebral body and contains the cauda equina. As you know this is the place whence we get spinal fluid when we do a lumbar tap. Communication between these two systems takes place through the foramina of Luschka and Magendie. Normally the space between the pia and the arachnoid is a potential one. The pia, as you know, is closely adherent to the surface of the brain and spinal cord and dips into the fissures and gyri; the arachnoid on the other hand bridges over these spaces; several web-like processes of arachnoid extend between it and the pia so that the depth of the subarachnoid space varies considerably.

Obstructive hydrocephalus can be caused by any process, be it formation of fibrous tissues as the result of inflammatory changes, congenital anomalies or an intracranial mass, which obstructs and impedes the flow of cerebrospinal fluid through the aqueduct of Sylvius, or through any of the foramina mentioned previously.

It was believed that the cerebrospinal fluid was elaborated chiefly by the choroid plexuses in the ventricles and by dialysis of blood plasma. Recently, by the use of radioactive substances, it has been shown that this process is more complicated. It has been shown that water, electrolytes and protein enter and leave the ventricles and the subarachnoid space at dissimilar rates. In decreasing order of velocity, the exchange of these substances is: water, electrolytes and protein. It has also been shown that electrolytes enter the cerebrospinal fluid of the ventricles at a more active rate than they do the subarachnoid space. On the other hand, protein enters the subarachnoid space more rapidly than it does the ventricles. With these few remarks let us go on with our case. Dr. Ettman, will you please show the x-rays; they should be of great help in arriving at the correct diagnosis.

DR. ETTMAN: The heart and lungs are within normal limits. The routine skull films show no evidence of calcification in any area. The sella turcica is not remarkable. In the A-P view of ventriculogram there is marked dilatation of both lateral ventricles (Fig. 1). The third ventricle is

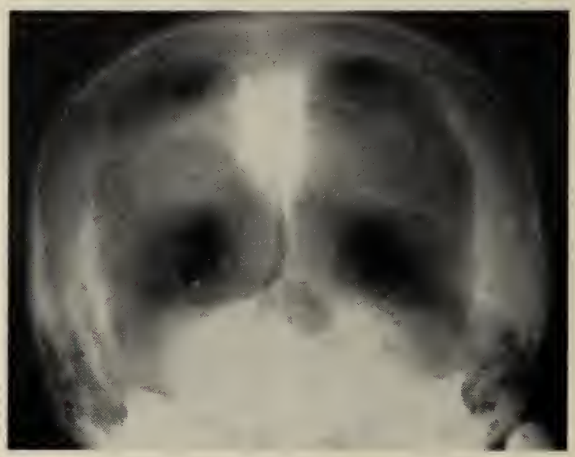


FIG. 1.

not visualized. In the brow-up position there is a soft tissue density projecting into the dilated ventricle in the region of the sella turcica (Fig. 2). The cerebro-arterio-

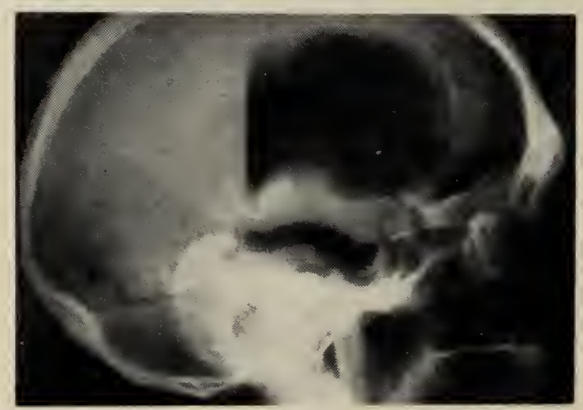


FIG. 2.

gram shows good filling of all of the vessels. On the lateral view the branches of the anterior cerebral artery are arched up. This would fit with the enlargement of the lateral ventricles seen on the ventriculogram.

DR. LEFKOVITS: Let us return to our patient. I am intrigued by the story relating to the episodes of unconsciousness which recurred at 5 to 8 year intervals and which were relieved by spinal puncture and the removal of fluid. I estimate that he

had about 5 such episodes during the 30 year period which elapsed between their onset and his death. Whether or not the removal of fluid had anything to do with the relief of the episodes of unconsciousness is certainly open to some doubt. Just because an event follows another does not necessarily mean that they are related.

Hydrocephalus, of course, implies that there is an increased amount of cerebrospinal fluid, usually associated with enlarged ventricles and increased intracranial pressure. It may result from atrophy or degeneration of the brain. In such instances it is called secondary or compensatory hydrocephalus; the fluid simply replaces the space between the brain and the skull which was previously occupied by the brain. The type of hydrocephalus with which we are concerned is the obstructive type. In general, hydrocephalus results from one of 3 causes: (1) excessive formation of fluid, and I believe one case was reported in which it was thought the choroid plexus was hypertrophied and caused increased production of cerebrospinal fluid; (2) defective absorption of fluid; and (3) obstruction anywhere along the path which I indicated before. Of the many causes of obstructive hydrocephalus, we may mention congenital malformations, such as Arnold-Chiari malformation, atresia of the aqueduct of Sylvius and atresia or narrowing of any of the interventricular foramina. The more common causes are inflammatory diseases such as meningitis. This patient had a disease which was diagnosed as meningitis and he may well have had adhesive arachnoiditis which led to fibrosis and narrowing of one of the foramina of the lateral ventricles or the 3rd ventricle and caused obstruction. The obstruction is usually not complete, so partial communication exists between the ventricles and some flow of fluid may occur between the dilated ventricles and the subarachnoid space. It is said that complete obstruction would cause death in one or two days. Intracranial tumors or other space-occupying masses within the brain may cause obstruction anywhere along the pathway of the flow of cerebrospinal fluid.

The symptoms caused by hydrocephalus, as you know, depend upon the age of the patient, the rapidity with which the fluid is collected, and the underlying cause. In children, when the sutures are not united, the bones of the skull separate and the head enlarges; they may develop convulsions, blindness with optic atrophy, bilateral pyramidal tract signs, and aberrations of the mental state.

In older individuals, where the skull has already formed, there may be headache, vomiting, papilledema and signs of increased intracranial pressure. The mental state may be effected moderately or severely. There may also be episodic impairment of vision, numbness of the face, weakness of the lower extremities, cranial nerve palsies, etc. If increased intracranial pressure has been present for a long time, changes can result depending upon which part of the brain is compressed. Thus, the hypothalamus may be involved and cause the hypothalmic syndrome—diabetes insipidus, hypopituitarism, obesity, sexual aberration, etc.—signs which appear after increased intracranial pressure had been present and therefore are not of great localizing value because a host of conditions which are accompanied by increased intracranial pressure may cause similar manifestations. Our patient presented some localizing signs. As you know, we are told in the protocol that his right pupil was dilated, he had spasticity of the extremities, a Babinski reflex and increased reflexes on the left side, all of which suggest a lesion somewhere in the right cerebral hemisphere. However, because this man had increased intracranial pressure for a long time, I doubt very much that these abnormal signs indicate a localizing lesion in the right hemisphere of the brain. Some of the tumors which tend to produce increased intracranial pressure without conspicuous localizing signs are. medulloblastomas, ependymomas of the 4th ventricle, colloid cyst of the 3rd ventricle, craniopharyngiomas, gliomas of the corpus callosum and frontal lobes, gliomas of the tegmentum blocking the aqueduct of Sylvius, pinealomas and hemangioblastomas.

There are also certain medical disorders which may be associated with increased intracranial pressure without conspicuous localizing signs. These are:

(1) Pseudomotor cerebri

(2) Hypertensive encephalopathy

(3) Chronic emphysema or other chronic lung diseases with cyanosis, dyspnea, signs of cor pulmonale, secondary polycythemia and right sided congestive heart failure.

(4) Chronic adhesive arachnoiditis, due to fibrosing meningeal disease.

(5) Thrombosis of the jugular veins and the lateral and posterior parts of the superior sagittal sinus.

(6) Addison's disease and hyperthyroidism, rarely.

In this connection we note that this man had an elevated BUN. and one may wonder whether he had uremia or hypertensive encephalopathy. As far as I can see, however, there is nothing here to indicate that any of these medical conditions existed in our case. There are also a number of miscellaneous conditions which may be associated with increased intracranial pressure such as: brain abscess, granulomatous lesions—tuberculoma or gumma—subdural hematoma, congenital malformations, and infections including the encephalitides. Since we are told that this man had tuberculosis, one wonders whether he had a tuberculoma somewhere in the region of the aqueduct of Sylvius, which could have produced obstruction and increased intracranial pressure. I think, however, that the x-ray findings, namely nonvisualization of the 3rd and 4th ventricles, and the suggestion that the 3rd ventricle was partially occluded by a mass, indicate that the most likely cause for this man's disease was a tumor in the 3rd ventricle. Tumors at this site may originate from the choroid plexus, ependymal cell nests or the tela choroidea. The following list includes most of the tumors which have been found in the 3rd ventricle: (1) choroid plexus papilloma; (2) colloid cyst of the paraphysis; (3) meningioma of the tela choroidea; (4) epidermoids; and (5) gliomas.

These tumors not infrequently are very small, may lie entirely within the ventricle and cause no symptoms. Symptoms arise only when obstruction to the flow of cerebrospinal fluid occurs, or when the tumor infiltrates adjacent cerebral tissue. Usually the resulting dilatation of the lateral ventricles is bilateral, uniform and symmetrical and that is what we find in this man. The symptoms of increased intracranial pressure can, however, arise very early and initially may be intermittent. The most common symptoms noted in proven cases of tumors of the 3rd ventricle are headache, nausea, papilledema and hydrocephalus. The headache is often accompanied by stupor. One of the characteristics of the headache is that it occurs only in certain positions and can be relieved by change of position. This is explained by the fact that apparently these tumors not infrequently have a long pedicle so they are movable, produce a ball-valve effect and intermittently occlude the aqueduct of Sylvius. The episodes of intermittent obstruction, however, can be very severe and may lead to unconsciousness. I found one case report of a patient who had no headache but had episodes of loss of consciousness. Our man had such episodes at 5 to 8 year intervals. Whether the removal of fluid had anything to do with the relief of symptoms by way of ball-valve effect, I cannot tell. This is certainly suggested and it seems to me that the episodes of loss of consciousness were probably related to a tumor in the 3rd ventricle which caused intermittent obstruction of the aqueduct of Sylvius. Coma and death may result if the obstruction is not relieved within one or two days. Eye signs are often seen in tumors of the 3rd ventricle, such as loss of vision, double vision, unequal pupils, ptosis—either uni- or bilateral. They may also have major epileptic seizures, numbness or weakness of the legs, staggering gait, as if the patient were drunk, stumbling and falling, a tendency of the legs to give way, spasticity of the lower extremities, Babinski sign, positive Romberg, and increased deep tendon reflexes. Our patient had unequal pupils and some trouble in walking and signs suggesting involvement of the pyramidal tracts. They may also have mental disturbances varying from impaired memory to severe mental deterioration, psychotic delusions or persecutions, and signs of involvement of the hypothalamus such as hypersomnia, diencephalic signs, diabetes insipidus, and hypo- or hyperthermia. For years these episodes may be periodic and may be accompanied by cycles of increased intracranial pressure. Eventually, however, they

persist and lead to death. X-ray examinations often show convolutional atrophy and hammered-silver appearance of the skull characteristic of increased intracranial pressure. Erosion of the dorsum sellae and of the clinoid processes and abnormal calcifications have been also seen in these patients. Unfortunately, in our case there were no such x-ray signs. The ventriculogram may show, just as it did in our case, moderate to extreme dilatation of the lateral ventricles and nonfilling of the 3rd and 4th ventricles; sometimes a mass in the 3rd ventricle can be seen.

The tumors which are attended by the most favorable prognosis are the cystic tumors or colloid cysts which arise from the roof of the 3rd ventricle.[1] These are usually uni- or multilocular, are filled with a tenacious fluid or colloid material and are lined by flat or cuboidal epithelium surrounded by connective tissue. The solid tumors are often uniform in appearance and encapsulated and, if discovered early, can be removed by excision. The capsule is thin, greyish-pink, granular or cellular and friable, may be entirely calcified, and it is usually attached to the wall of the 3rd ventricle. Tumors arising from outside the 3rd ventricle may impinge upon the ventricle and obliterate it partially or completely and give rise to some or all the manifestations caused by tumors arising within the ventricle.

I ran across an article which discussed tumors in the posterior part of the 3rd ventricle.[2] There were 32 patients of which 24 were males and 8 were females. The age of the patients varied between 14 months and 64 years, with an average of 21 years. Eighteen were under 16 years of age, indicating that most of these tumors are seen in younger people. All these cases were verified at operation or at postmortem. The longest preoperative duration of symptoms was 5 years. The predominating symptoms were precipitated by obstruction of the aqueduct of Sylvius resulting in either acute or chronic increased intracranial pressure and consisted of headache, nausea, vomiting, papilledema, and blurring of vision; in some, optic atrophy was noted. Alteration in occular movement was present in 15 patients, and limitation to complete absence of upward gaze in 15. I might comment here that pinealomas can be diagnosed from a combination of two symptoms—increased intracranial pressure and paralysis of upward gaze, the so-called Parinaud's syndrome. Inequality of the pupils and mydriasis were present in 9 of the 32 patients. A few patients had cerebellar signs, spastic extremities, weakness of the legs and a host of other manifestations which I am not going to discuss because my time is just about up.

The terminating event is somewhat disconcerting. Four days prior to the onset of fever and shock-like symptoms he had a lumbar tap. As you know, tapping the spine when an individual has increased intracranial pressure is a very dangerous procedure because of the possibility of herniation of the medulla and the cerebellar tonsils into the foramen magnum. Had this man had these symptoms immediately after the tap our problem would be very simple. However, because of the four day interval, it is difficult for me to believe that this man had herniation of the cerebellar tonsils and medulla. It is not inconceivable, however, that in the presence of intracranial pressure such a herniation may occur. A few additional findings deserve comment: the ventricular tap revealed 640 red blood cells of which 2% were crenated. New crenation of red blood cells by itself has no diagnostic significance. Whether the blood had been present in the ventricle before the tap or whether the blood resulted from trauma is conjectural. He may well have had bleeding into the ventricle. Tumors anywhere in the brain may be accompanied by bleeding into the tumor and, if that were the case, it would explain the small amount of blood that was present in the ventricular fluid. As you know one way of differentiating a traumatic tap from blood which had already existed in the cerebrospinal fluid would be to collect the fluid in more than one tube; if it is traumatic, blood is present in the first tube and is present in decreasing amounts in the 2nd or 3rd tube; xanthochromic fluid usually indicates that the blood in the spinal fluid was present prior to obtaining the fluid. We don't have this information here. It is very likely that this man had some bleeding into the tumor and

was responsible for the blood in the ventricular fluid.

The spinal fluid chloride was 136 mEq/L. As you know, in our laboratory, the normal values of spinal fluid chloride is between 121 and 129 mEq/L. Since the patient was slightly acidotic, I suppose the slight elevation of chlorides could be explained on that basis. No other abnormalities were found in the spinal fluid; the spinal fluid proteins were only 19 mg.%, indicating that the spinal fluid was fairly normal. The BUN. elevation also deserves some comment. On admission to the hospital his BUN. was 135 mg. and two days later it was 168 mg. per 100 ml. I am wondering whether this man was not dehydrated on admission to the hospital. He was later given Urevert. As you know, this consists of a solution containing 30% urea in 10% invert sugar. I suppose that the 2nd BUN. level was probably influenced by the administration of Urevert. Another possibility for the terminal event—the shock-like state, leukocytosis of 29,000 with a shift to the left and fever—is that this man had some overwhelming infection such as miliary tuberculosis which caused the fever and leukocytosis. While this is merely a guess, it certainly must be considered. Still another possibility, in view of the tachycardia and shock, is that terminally he had a myocardial infarction. This again would be sheer guess. My final diagnosis is that this man probably had a colloid cyst of the 3rd ventricle. The terminal event may have been due either to herniation of the medulla and cerebral tonsil into the foramen of magnum, or that he had hemorrhage into the tumor, into the ventricular space or perhaps that he had an infection such as miliary tuberculosis.

DR. DIETRICH: So you think this tumor could have caused intermittent periods of unconsciousness for a period of years?

DR. LEFKOVITS: Yes, I think that is very likely. This tumor must have had a stalk, moved about and intermittently caused a ball-valve effect, causing intermittent obstruction of the ventricle of the aqueduct of Sylvius.

Pathologic Findings

DR. GOURLEY: At the time of autopsy, this was the body of a well developed, well nourished 63 year old white man. The head was shaved, there were bilateral burr holes, and a tracheostomy opening was present.

When the body was opened the pleural cavities showed nothing of note. The right lung weighed 620 Gm. and the left 460 Gm. Microscopically, both lungs showed moderate pulmonary edema.

The heart weighed 300 Gm. and showed nothing significant. The liver, however, weighed 2200 Gm. Grossly it was light brown in color and microscopically it showed moderate fatty metamorphosis, particularly in the pericentral areas. The kidneys were not enlarged. Each weighed about 160 Gm., and on cut surface appeared slightly paler than normal. Microscopic examination revealed moderate tubular damage consistent with an early lower nephron nephrosis. This patient was admitted in a shocklike state with a blood pressure of 80/0. How long this had existed prior to admission we do not know, but I presume this was responsible for the renal damage. Some of the elevation of the BUN. may have been due to this early nephron nephrosis. Microscopically, there was no evidence of any chronic renal disease.

With the exception of the brain the other organs were not remarkable. When the brain was removed it weighed 1400 Gm. Externally it was not striking. The pituitary and its stalk were not abnormal. There was no evidence that there had been any herniation of the uncal gyri and there had been no impingement of the cerebellar tonsils in the foramen magnum. When the brain was sectioned, there was tremendous dilatation of the lateral ventricles, and the region of the 3rd ventricle was found to be almost completely filled with an encapsulated cystic lesion which measured 3.5 to 4 cm. in diameter (Fig. 3). Certainly, cir-

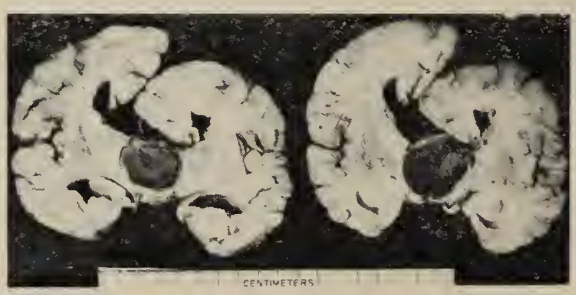


FIG. 3.

culation of cerebrospinal fluid through the 3rd ventricle must have been quite small. I believe the terminal episode can be explained by complete occlusion of the 3rd ventricle.

Microscopically, the cyst was filled with an acellular material in which were numerous cleft-like spaces characteristic of cholesterol crystals. Everywhere the cyst had a thin wall. In many places there was no lining at all, as though this cyst had been there for a long period of time and any lining membrane had disappeared through pressure. In the wall itself were multifocal small areas of calcification, but apparently not large enough to show up on x-ray. In portions of the wall where a lining was present it had a suggestion of squamous epithelium (Fig. 4), and for this reason we



FIG. 4.

felt that the cyst fell into the epidermoid cyst variety. The material present within the cyst would be much more consistent with that of an epidermoid cyst than that of a colloid cyst of the 3rd ventricle.

Suprasellar epidermoid cysts are commonly observed in childhood and adolescence. However, they are by no means rare in later life.

The histogenesis of these lesions is somewhat debatable. The development of epidermoid cysts at the level of the pituitary stalk or tuber cinerum is usually related to nests of squamous cells found within the pituitary stalk, believed to represent remnants of Rathke's pouch. It is possible that rotation of the anterior pituitary forward and upward during early development could bring such remnants into a suprasellar position. Since these nests of squamous cells are rarely if ever found before adult life, some investigators have questioned their congenital origin and suggest that the epithelial "rests" are actually a result of a transition or metaplasia or pituitary cells to squamous cells. This, however, does not satisfactorily explain the origin of suprasellar epidermoid cysts. The occurrence of these tumors mostly in children strongly points to a developmental origin. Whatever explanation you accept this is a most interesting case that we are calling an epidermoid cyst involving the 3rd ventricle.

Final Anatomic Diagnosis: Suprasellar epidermoid cyst.

References

1. Poppen, James L., Reyes, Victor and Horrax, Gilbert: Colloid Cysts of the Third Ventricle, J. Neurosurg. 10:242, 1953.

2. Rand, Robert W. and Lemmen, Lloyd J.: Tumors of the Posterior Portion of the Third Ventricle, J. Neurosurg. 10:1, 1953.

President's Page



Dr. Kampmeier

The lines of ideology may not be sharply drawn at times between it and democracy. We have long had a modicum of socialism, either inherited or established. The public school system began in Massachusetts within 20 years of the landing of the Pilgrims, and Washington and Jefferson later were exponents of its extension. The postal system of the Constitution originated with the Continental Congress establishing post-roads to compete with private ones, and with a monopoly to carry the mail on them. We obviously have continued to venture into socialistic programs whether for flood control or Telstar.

In the name of the Constitution and the phrase "(to) promote the general welfare" in its Preamble, more social legislation, for which there is no warrant outlined in the powers of Congress, will continue to be proposed. There can be no "common good" without harm to some individuals. Every voter must determine for himself the limits of this vis-a-vis, recognizing at the same time that politicians often prostitute the "general welfare" for political aggrandizement.

On the table is a socialistic measure to extend medical aid. The socialistic implications in public health, the care of the chronically ill and the care of the indigent by the community and certain welfare legislation are accepted for the common good. But the extension of hospitalization to a segment of the population which does not need it is highly debatable, particularly if the taxation for the "general Welfare" overrides the personal good of the tax paying citizen.

If the current medicare bill were passed, I as a "senior citizen" eligible to its benefits, along with some 10± million like me who have voluntary health insurance, might decide to drop the insurance as superfluous. This saving in premiums would give me nights out at the *Lido* and the *Folies Bergère* on the next visit to Paris. To be sure the Gore amendment would force the employer and employee *each* to contribute in 1965, $238.00 (currently $174.00) to give me my nights out. (The tax for the self-employed would increase from $259 to $358.) Since a university must give this to each employee, an increase in students' tuition might be needed to help toward my savings on insurance premiums. The producer of goods will need to pass the cost to the consumer. The hospital will need to pass on its increased taxation to the patient—of course the increased cost of hospitalization will require new amendments to increase the Social Security tax! The employees of the university, the hospital and in industry, because of their increased taxes, will have a *lessened take-home pay,* coupled with increased cost of goods, tuition for the son, and premiums for health insurance for those under 65. They will need to ask or strike for more base pay, which in turn will increase the employer's Social Security tax and that of some employees. Then the spiral will start all over again!

It makes one dizzy to contemplate this spiral,—somewhat akin to viewing the images in a hall of mirrors. I am reminded of the Fourth of July celebration at the county fairgrounds in about 1910,—as the balloon with its parachute dangling below and a trapeze on which sat a woman in pink tights began to rise into the air, the frenzied barker shouting—"Up and up she goes—when she comes down nobody knows!"

Seemingly, medicare will not pass in this Congress and, whether by design or not, will provide a "tear-jerking" campaign issue. Is it for the "general Welfare" that the taxpayer should commit himself to literally pay for my hospitalization and that of millions like me! Or, should the voter think on that other phrase in the Preamble of the Constitution—"(to) secure the Blessings of Liberty to ourselves and our Posterity?"



President

THE JOURNAL
OF THE
TENNESSEE MEDICAL ASSOCIATION
Published Monthly
Devoted to the Interests of the Medical Profession of Tennessee
Office of Publication, 112 Louise Avenue, Nashville 5, Tenn.

Acceptance for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized July 15, 1932.

Copyright for protection against republication. Journals of the American Medical Association and of other state medical associations may feel free to quote from this Journal whenever they desire merely giving credit to this publication.

Address papers, discussions and scientific matter to R. H. Kampmeier, M.D., Editor, B-4211 Vanderbilt University Hospital, Nashville 12, Tennessee
Address organizational matters to Jack E. Ballentine, Executive Director, 112 Louise Avenue, Nashville 5, Tenn.

R. H. KAMPMEIER, M.D., Editor
Vanderbilt University, School of Medicine, Nashville, Tenn.

ADDISON B. SCOVILLE, JR., M.D., Assistant Editor
2104 West End Ave., Nashville, Tenn.

COMMITTEE ON SCIENTIFIC WORK AND POST GRADUATE EDUCATION
R. H. Kampmeier, M.D., Chairman
W. Powell Hutcherson, M.D., Chattanooga
Robert P. McBurney, M.D., Memphis
Eugene J. Spiotta, M.D., Memphis
(Specialty Society Representatives to be named)

OCTOBER, 1964

EDITORIAL

EMERGENCY MEDICAL IDENTIFICATION SYMBOL

In June of 1963 the American Medical Association announced the symbol which means to anyone caring for an ill or injured stranger wearing the symbol, "Look for medical information that can protect life." In the past year thousands of persons have begun to wear a metal or plastic symbol around the neck, the arm or ankle, at all times and even when swimming.



This symbol has been freely offered by the A.M.A. to jewelers and other manufacturers of emergency medical signal devices. (A list of these may be obtained from the A.M.A. upon request.) Some devices may have engraved upon them a few significant words indicating the wearer's medical problem. Others consist only of the symbol which indicates to emergency personnel a search of a purse or a billfold for the *Emergency Medical Identification Card.* An increasing number of corporations and associations are using the symbol on their identification cards.

The card, as folded, is the size of a calling card. It carries personal identification, persons to notify in an emergency and the personal doctor's name, address and phone number. It has space for the listing of: *Medical Problems* (epilepsy, diabetes, hemophilia, chorea and others); *Medicines Taken Regularly* (anticoagulants, cortisone or ACTH, digitalis, nitrites, etc.); *Dangerous Allergies* (drug allergies, horse serum, common foods, penicillin sensitivity, feather pillows); *Other Important Information* (recurring unconsciousness, hard of hearing, scuba diver, inability to speak English, listing other languages spoken); *Immunizations* (especially listing those of recent years and particularly the date of first receiving tetanus toxoid and the date of the last booster dose). Cards may be purchased from the A.M.A. for a few cents per each.

It is hoped that readers of these comments will be on the alert for this symbol on the body of the unconscious or confused person and that they will inform their office personnel of its significance. They should also see that notice of this symbol is posted in the emergency room of hospitals so the house officer and nurse will be aware of its meaning. Lastly, doctors should urge upon their patients, who should be so protected in an emergency, the use of the symbol and should give the patient the *Emergency Medical Identification Card.*

R. H. K.

★

NORMAN A. WELCH, M.D.

The death of Dr. Welch, President of the American Medical Association, on September 3rd, was a shock to its officers and to his host of friends. His untimely death came just as he was beginning to reach his stride in this most responsible of positions.

Since I had never had the pleasure of

knowing Dr. Welch, and yet wished to acknowledge his contributions to Medicine, I called upon our senior delegate to the House of Delegates, Dr. Charles Smeltzer to assist me. He had known Dr. Welch well, as a friend and as a colleague in committees and other affairs of the House of Delegates. Dr. Welch was described to me as a strikingly handsome man, who acted with gentleness and dignity. He spoke deliberately in a deep rich voice, and only after thoughtful consideration of the topic at hand.

Dr. Smeltzer first came to know Dr. Welch while he was still a Delegate from Massachusetts, and observed his progress through the Council on Medical Service, the Vice-speakership of the House, then to become Speaker of the House. He was held in such high esteem by members of the House of Delegates that he was unopposed when nominated for the office of President-elect. Dr. Smeltzer ended by saying, "He had a warm, vibrant personality, and always had a willing ear for any problem pertaining to the affairs of Medicine. Talented, poised, gentle, devoted to duty, witty sense of humour, are words or terms I often heard used in describing him. Others can and will carry on, but Norm Welch cannot be replaced."

R. H. K.



County Medical Societies Are Asked To Encourage Working Relationships Between Physicians And Clergymen*

County medical societies are being asked by the American Medical Association and the Tennessee Medical Association to bring physicians and clergymen together in small groups, on two or more occasions each, so they can become better acquainted, and by exchanging impressions and information, can prepare to work together more closely in helping the people whom they serve. At the national level, this project is one of the responsibilities of Rev. Dr. Paul B. McCleave, a Presbyterian minister and the director of the newly formed AMA Department of Medicine and Religion, and a committee of nationally prominent physicians and clergymen. At the state level a recently

*From the Committee on Medicine and Religion.

appointed committee with the same purpose consists of T. G. Pennington, M.D., Chairman, Nashville; H. Dewey Peters, M.D., Knoxville; Gilbert J. Levy, M.D., Memphis; John P. Nash, M.D., Memphis; and Ira L. Arnold, M.D., Chattanooga.

In preventing disease and in treating physical ailments, physicians need all the help they can enlist, and particularly in their efforts to "heal the whole man," the talents and skills that clergymen possess are ones of which they should want to avail their patients. The pastor and the doctor work in close proximity to one another on many occasions, but too often each of them is not fully aware of what the other is saying. Thus the intent of this project is not to devise new tasks, objectives or responsibilities for the members of either profession, but merely to facilitate acquaintanceship and frequent exchanges of information between them, man to man.

Clergymen Are Already Doing Essential Health Work

All of us are familiar with the essential services which chaplains perform in our hospitals. Frequently they make a valuable contribution merely through their cordiality to patients when they are admitted. The chaplain is a welcome friend in the starched and antiseptic world which the patient has just entered, and he constitutes a link with the family and friends whom the patient has left behind. More often than not, both lifelong-devout men and women and those who previously have not been religiously inclined feel a need for the chaplain's prayers and reassurances, and sometimes it is apparent, indeed, that a patient's physical and psychologic states have benefitted as much from the chaplain's attentions as from those of the doctor and nurses.

Clergymen with churches to manage and congregations to care for visit the hospitals occasionally and share in the chaplain's work, but most of their calls upon the sick and disabled occur in private homes. There, and at their churches, they bring consolation to the bereaved and the guilt-laden, they provide moral support to those whom illnesses have left with permanent handicaps, and they reinstill hope, faith and self-confidence. Moreover, to the extent that their information permits, they exhort patients to follow their doctors' advice. Unfortunately, however, a pastor too frequently knows only as much about his parishioner's ailments and about the therapeutic or rehabilitative program the doctor has outlined as the parishioner can tell him. How much more might he be able to do for the man or woman's recovery if the doctor were to provide him additional information!

The Pastor's Help Is Valuable In Many Situations

Many patients confined to their homes have disabilities requiring precautions or continuing medication that clergymen can help unobtrusively to enforce or supervise. Tuberculosis, for example, no longer requires prolonged hospitalization in most instances, but tuberculous patients must observe strict rules of sanitation after they return home, for the protection of thus far uninfected members of their families. Since such patients characteristically think they have recovered long before the infection has been eradicated, they need frequent reminders of their responsibility to their relatives and of their need for continuing with their prescribed medications.

There are many other situations in which a clergyman will be glad to cooperate with the doctor. He can help persuade the diabetic patient to keep her disease under strict control. He can share the task of helping a family to understand the special requirements of a patient who is about to return to their home from a mental ward. And he can urge the members of his congregation—from the pulpit and in private consultations—to keep up their immunizations against tetanus, smallpox, poliomyelitis and measles, and can remind them of their duty to keep poisons, firearms and sharp instruments out of the hands of their small children.

In the continuing care of elderly patients, a clergyman can render extraordinary service by making sure, periodically, that they are consuming adequate daily diets—if his parishioners' physician has told him the minimum constituents of that diet. Furthermore, if he finds when he visits them, that all is no longer well, he can inform their children or other relatives, or can call

upon one of his numerous church groups for assistance.

Not just in a few situations but in most of them, what patients need as much as anything else is a sympathetic listener, and the clergyman frequently serves in that capacity. In anticipation of such a session, however, the pastor would welcome the physician's views regarding the patient's psychologic needs.

Physician-Clergyman Meetings Should be Small, Informal and Frequent

Meetings between clergymen and doctors should be as small and informal as possible, and such sessions should not be used, even in part, for the presentation of medicine's point of view on socio-economic issues.

In the less-populous Tennessee counties it may be satisfactory for the entire clergy to be invited to meet with all of the doctors, but in ones where there are more than a dozen members of each profession, several series of meetings should be started. The doctors in each small group should represent a full assortment of the faiths present in the community and each of them probably should be asked personally to invite the pastor of the church that he attends. Quarterly or semi-annual dinners with a maximum of eight men seated at each table may be the best means of encouraging acquaintanceships. The program might best be limited to a few words of welcome from one of the physicians. In any case, give the doctor and clergyman an opportunity to discuss this mutual concern—"healing the whole man."

If *you* have an idea or a new slant as to how this committee can better serve its purpose, we would appreciate hearing it; or if you have a request for additional information, do not hesitate to contact the Committee on Medicine and Religion, Tennessee Medical Association, 112 Louise Avenue, Nashville, Tennessee 37203.

DEATHS

Dr. John Alva McQuiston, Memphis, 74, died August 29th at St. Joseph Hospital.

Dr. James Walker Carroll, 39, Savannah, died in an automobile accident on September 7th.

Dr. Kermit E. Jones, 44, Westmoreland, died August 16th at his home.

Dr. C. Ray Womack, 43, Memphis, died on September 7th.

Dr. William A. Shelton, 71, Knoxville, died August 24th at Fort Sanders Presbyterian Hospital.

Dr. Walter J. Wadlington, 92, who was one of the oldest practicing physicians in Memphis when he retired in 1963, died September 13th in a hospital in Biloxi, Mississippi.

Dr. Samuel H. Freas, 56, formerly of South Pittsburg and Lebanon, died in a Charleston, South Carolina Hospital on September 6th.

PROGRAMS AND NEWS OF MEDICAL SOCIETIES

Chattanooga-Hamilton County Medical Society

"Political Candidates" was a subject discussed at the October 6th meeting of the Society held in the Interstate auditorium. The scientific portion of the meeting consisted of a paper presented by Dr. Warren B. Henry, entitled "Steroid Therapy and Activation of Pulmonary Tuberculosis"; and an interesting case report by Dr. Durwood Kirk.

Nashville Academy of Medicine Davidson County Medical Society

In a move to assure full attendance and informed representation by regular delegates to the TMA House, the Academy at its September 8 meeting amended its By-laws so as to provide for three-year, staggered terms for its delegates to the TMA House of Delegates. The amendment also requires that all members be given an opportunity to indicate interest in serving as delegates, and that nominations for delegates be based on members' qualifications, interest, and assurance that House meetings will be attended.

On October 13th, a business session was held by the Society in the Baptist Hospital Medical Auditorium. Projects, policies and programs were discussed, considered and acted upon by the membership.

Knoxville Academy of Medicine

Dr. Bernard Silverstein, Director of the Hearing and Speech Center at the University of Tennessee, was guest speaker at the meeting of the Knoxville Academy of Med-

icine on September 8th. His subject was "The Physician's Role in Speech and Hearing."

Roane-Anderson County Medical Society

Since the AMA, through its Department of Religion, is encouraging closer cooperation between Doctor and Clergy, and the establishment of Committees on "Medicine and Religion" by state and county medical societies, the September 29th meeting of the Roane-Anderson County Society had as guest speaker, Dr. H. Dewey Peters, former chairman and a member of the TMA Committee. All ministers from Roane and Anderson counties were invited to attend the dinner meeting held in the cafeteria of the Oak Ridge Hospital.

Consolidated Medical Assembly of West Tennessee

At the meeting on September 1, the Assembly had as its principal speaker, Mr. Dan H. Kuykendall, candidate for the U. S. Senate. The public was invited to attend and a large group of physicians, other citizens and their wives gathered at the New Southern Hotel to hear the address. Mr. Howard Baker, also a candidate for the U. S. Senate, was introduced and presented brief remarks.

Dr. Lee Russ, President of the Society, presided at the meeting and guest speakers were introduced by Dr. Lamb B. Myhr.

Dr. John H. Burkhart Receives an Accolade

Dr. Burkhart, President of the Knoxville Academy of Medicine and the new President-elect of the Tennessee Medical Association, was honored by recognition in the A.M.A. PR Doctor (July-August issue). He was recognized for his sense of duty to the profession to his many responsibilities to the community as a citizen. The article pointed up that Dr. Burkhart is serving his sixth term as President of the Knoxville Board of Education and has always played an active role in civic and church affairs. He is quoted as having summarized acceptance of a citizen's responsibility by saying "physicians are busy, but other persons are busy too." As a doctor too he has always acknowledged his responsibility to the sick and only impossible circumstances have kept him from answering a sick person's call day or night. He has always taken his turn with the Knoxville Academy's emergency call service over the past decade.

It is pleasing, indeed, to see such public recognition for our President-elect's contributions to his community and to the sick.

NATIONAL NEWS

The Month in Washington
(From the Washington Office, AMA)

Physician ownership of pharmacies is ethical so long as the patient is not exploited, the American Medical Association told Congress. Robert B. Throckmorton, AMA General Counsel, testified before the Senate Subcommittee on Antitrust and Monopoly that: "The ownership of a pharmacy by a physician cannot in itself be equated with exploitation. The confidence and trust that the patient reposes in his doctor—to use his knowledge, his skill, his judgment in prescribing medicines, and his understanding of the patient's financial problems —preclude a blanket charge of physician-pharmacy-exploitation.

"It would be a disservice to the public and to the medical profession if from these hearings there issued the unwarranted impression that physicians could not be trusted to own pharmacies or to carry on their professional practices in other more important respects without exploiting their patients. It would be unfortunate . . . if a small incidence of violations and alleged violations came to be accepted as 'proof' of widespread unethical practices."

Throckmorton pointed out that both the AMA House of Delegates and the AMA Judicial Council had ruled that it is not wrong, per se, for a physician to have a financial interest in a pharmacy. However, he added, the AMA House of Delegates last year adopted flat prohibitions against physician ownership in a drug repackaging company or controlling interest in a pharmaceutical company while engaged in the practice of medicine. He said that there were relatively few cases of such ownership.

Throckmorton said that less than two percent of the nation's 280,000 physicians have

any financial interest in drug repackaging companies. "Most physicians who acquired financial interests in repackaging firms prior to the AMA statement of policy acted in good faith," he said. "Unless they were a part of the tattered fringe of practitioners who intended to exploit their patients, they had no reason to believe that they were engaging in any unethical act. Many of these physicians who still retain their ownership can, at the most, be censored only for 'good faith misbehavior.' However, any continued ownership, beyond a reasonable period of time to permit severance without undue hardship, should call for the institution of prompt disciplinary action within the ranks of medicine."

★

Congressional prospects brightened for legislation exempting community and other nonprofit blood banks from the antitrust laws. The chief counsel of the Senate Antitrust and Monopoly Subcommittee, Bernard Finsterwald, Jr., said he believed Congress eventually would approve this legislation, backed by the AMA.

The bill was introduced by Sen. Edward Long (D., Mo.) after a Federal Trade Commissioner examiner ruled that community blood banks are subject to antitrust laws and charged the Kansas City area community blood bank with restraint of trade by refusing to purchase blood from commercial, profit firms.

Dr. Gunnar Gundersen, chairman of the AMA Blood Bank Committee and a past president of AMA, told the Senate subcommittee that: "The AMA views with great concern the recent decision of the hearing examiner of the Federal Trade Commission finding that human whole blood is a commodity or article of commerce and as such is subject to 'trade' and 'commerce' within the meaning of those terms as used in the Federal Trade Commission Act. The import of this decision is fraught with many dangers and creates serious problems for the physician. Based upon this decision, the physician's and hospital's freedom of choice in selecting blood is severely restricted, lest they be deemed in restraint of trade.

Congress sent to the White House a record $1 billion budget for the National Institutes of Health. All told, the bill contained $6.5 billion for the HEW Department's activities during the current fiscal year. The lawmakers provided $1 million for the long-delayed environmental health center but specified that it be located no closer than 50 miles from the Washington, D. C. area. The Administration sought to have the center located in the Washington suburbs at Beltsville, Maryland.

Congress approved $222.6 million for the Hill-Burton program of federal aid for hospital construction, $110.8 million for federal aid to medical education, and $8 million for tuberculosis control activities.

As the measure finally cleared Congress, the HEW total was $603 million less than the Administration requested, but $942 million more than the House had originally voted.

★

A five-year, $283 million program of federal aid to spur the training of nurses was signed into law by President Johnson. The measure, supported in principle by the American Medical Association, provides for construction grants for collegiate schools of nursing, for grants to help defray the cost of nurses training, for traineeships for advanced training and student loans.

The new law authorizes $35 million over four years as grants to assist in the construction of new facilities for collegiate schools of nursing, or for the replacement or rehabilitation of existing facilities of that type.

It also provides for $55 million in four years for the construction of new facilities for associate degree or diploma schools of nursing, or for their replacement or rehabilitation.

MEDICAL NEWS IN TENNESSEE

University of Tennessee College of Medicine

A major U. S. Medical publication has paid special tribute to the University of Tennessee's Medical Units at Memphis. "University of Tennessee: Medical School

Success Story" is the featured article in an issue of Medical World News, distributed to practicing physicians, medical college faculty and interns throughout the country. In addition, the national publication features on its cover a full-color photograph of UT medical students on the steps of the College of Dentistry Building. Another full-color picture and several black and white photographs are included with the six-page article.

The article charts the growth of the UT school from near failure 45 years ago to its position today as one of the nation's major medical units. It pays special tribute to Dr. Orren Williams Hyman, emeritus dean and vice president, and the citizens of Memphis and Tennessee for the support that has made the development of the UT Medical School a reality.

★

Dr. Nicholas R. Di Luzio has been named acting chairman of the Department of Physiology and Biophysics to replace Dr. J. P. Quigley, who has retired. Dr. James R. Givens, research fellow in endocrinology at Vanderbilt University School of Medicine for the past two years, has been named assistant director of the Clinical Research Center in the new James K. Dobbs Medical Research Institute, now being constructed. Dr. Bob A. Freeman, assistant professor of microbiology at the University of Chicago Medical School since 1954, has been appointed an associate professor of microbiology. Dr. Paul Henry Sherman, trainee in surgical cardiology at the University of California in Los Angeles, has joined the staff as an assistant professor of surgery, assigned to the Section of Thoracic Surgery.

Memphis Ranks High in the Nation as a Medical Center

Announcement of Baptist Memorial Hospital's new annex, which will add 400 beds, further enhances Memphis as a medical center. The addition not only will raise the capacity of Baptist to 1,450 beds, making it one of the largest private hospitals in the country, but, along with other hospital construction under way or announced, will help the city keep pace with hospital needs.

Methodist Hospital's new 350-bed annex has been started. The William F. Bowld Research Hospital, with its 150 beds, is nearing completion. St. Joseph Hospital has announced plans for a new 350-bed addition.

These expansions will provide an additional 1,250 beds. In 1963, the Tennessee Public Health Service reported Memphis had 2,873 city and private hospital beds. The estimated number of beds needed by 1970 was placed at 4,129. The new construction, when completed, will help to meet that need, assuring the city of 4,123 general hospital beds. Memphis already ranks high in the nation as a medical center, and this standing will increase with these additions.

New Hospital Dedicated in Martin

Citizens of Martin and Weakley County attended dedication ceremonies on September 13th for the new Volunteer General Hospital in Martin. Joe Carr delivered the dedicatory address. The new hospital with modern equipment, has an official capacity of 49 beds. The facility cost approximately $850,000 with the federal government, under provisions of the Hill-Burton Act, supplying 52 percent of the total cost. The remainder was financed with money derived from the sale of a bond issue by the City of Martin.

Staff officers are: Dr. E. C. Thurmond, Jr. of Martin, chief of staff; Dr. E. H. Wells, Jr. of Dresden, vice chief of staff and Dr. Nathan Porter of Greenfield, secretary-treasurer.

$6.5 Million Hill-Burton Funds Slated for Tennessee

The State Department of Public Health has announced that more than $12 million will be spent in Tennessee on Hill-Burton hospitals, nursing homes and health centers in 1965. $6.5 million in federal Hill-Burton funds has been tentatively approved for the state in 1965. The Hill-Burton program awards matching funds to assist in construction of general, mental, tuberculosis and chronic disease hospitals, public health centers, diagnostic and treatment facilities, rehabilitation centers and nursing homes. To be eligible, a facility must fill a community need and be sponsored by a private nonprofit organization or by a public agency —city, county or state.

Tennessee Pediatric Society

Members assembled at Lakeshore Lodge, Chattanooga, on September 13-15 for the annual meeting of the Society. Guest speakers included: Dr. J. W. Gerrard, professor of pediatrics, University of Saskatchewan; Dr. Robert Stempfel, associate professor of pediatrics, Duke University Medical Center; and Dr. Joseph Stokes, Jr., professor of pediatrics, University of Pennsylvania.

Dr. Wm. G. Crook, Jackson, was elected president of the Society succeeding Dr. Pope B. Holliday of Chattanooga. Other officers elected on the first day of the session were Dr. Luther A. Beazley of Nashville, vice-president, and Dr. William P. Hardy of Oak Ridge was re-elected Secretary-treasurer.

A highlight of the meeting was the banquet held at the Pan-O-Ram Club on Lookout Mountain on September 14th. Pediatricians from several other Southern states also attended the meeting.

Health Director Appointed for Nashville and Davidson County

Dr. J. M. Bistowish, medical director for Leon County, Florida since 1949, has been selected as director of the Metropolitan Public Health Department of Nashville and Davidson County. Prior to 1949, Dr. Bistowish was assistant health officer for the Florida Board of Health training center in Gainesville, Florida. He succeeds Dr. John J. Lentz who retired July 1st after a half century of service in public health locally.

PERSONAL NEWS

The Rotary Club of Memphis paid tribute to **Dr. J. Spencer Speed** with its Vocational Service Award for his distinguished career in orthopedic surgery.

Dr. Robert Hollister has opened his office for the practice of medicine in Franklin.

Dr. John H. Burkhart, Knoxville, was guest speaker at the banquet during the recent meeting of the Tennessee Nursing Home Convention held at the Andrew Johnson Hotel in Knoxville.

Dr. Carl T. Stubblefield, Shelbyville, has been certified by the American Board of Radiology.

Dr. J. L. Hamman has joined **Dr. Robert L. Banner** in practice at Kingsport.

Dr. Robert F. Lash, director of the Poison Control Center at University Hospital, was guest speaker at a meeting of the Rotary Club of South Knoxville on August 31st.

Dr. W. K. Owen, Pulaski, has been named to the Tennessee State Board of Medical Examiners. He replaces **Dr. W. J. Johnson** of Pulaski who recently resigned the position.

Dr. Charlotte L. Olson has joined the staff of the Cumberland Clinic in Crossville as a specialist in pediatrics.

Dr. C. L. Lincoln, Elizabethton, was speaker at a recent meeting of the Kiwanis Club.

In honor of one of East Tennessee's most successful and best-known physicians, the John Sevier Chapter of General Practitioners proclaimed September 17th as "**Dr. Holt Bradshaw Day**" in Johnson City. Dr. Bradshaw is professor of surgery and chairman of the Bowman-Gray School of Medicine, Winston-Salem, N. C.

Dr. John T. Evans, Chattanooga, has moved his offices to the Medical Building at 1010 East Third Street.

Dr. Jean M. Hawkes presented a report on the International Diabetes Federation's meeting in Toronto, Canada, at the meeting of the Memphis Lay Diabetic Society on September 15th.

Dr. Hugh M. A. Smith, Memphis, made a tour of Alaskan military installations last month as a consultant in orthopedic surgery to the Air Force Surgeon General.

Two Memphis physicians have moved to Martin to take staff positions at the new Volunteer General Hospital. They are **Drs. Sam Denny** and **O. K. Smith.**

Dr. Richard O. Cannon, director of Vanderbilt Hospital, has been appointed chairman of American Hospital Association's Council on Blue Cross and Finance.

Dr. Charles MacMillan, Nashville, announced the removal of his office to 2111 Hayes St. for the practice of plastic reconstruction and maxillofacial surgery.

Dr. John R. Smith, Nashville, announces the opening of his office for the practice of Ophthalmology.

Dr. Lloyd H. Ramsey, President; **Dr. John Beveridge,** President-elect, and **Dr. Sarah H. Sell,** Vice-President, all of Nashville, assumed these offices in the Middle Tennessee Heart Association, on July 1.

Dr. Eric M. Chazen, Nashville, has relocated his office to 3906 Hillsboro Road in his practice limited to infants, children and adolescents.

Dr. Lee R. Minton, Nashville, has opened his office for the practice of ophthalmology.

ANNOUNCEMENTS

Vanderbilt University School of Medicine Postgraduate Courses

The Departments of Orthopedic Surgery and of Medicine will conduct a Postgraduate Day on

Thursday, October 29 on "Management of the Arthritis Patient." Current trends in the management of the arthritic patient will be presented, emphasizing practical therapeutic measures. Participating in the demonstrations will be members of the Physical Therapy Service. Time will be allowed for discussion of problem cases as requested by the participants in the course.

This course is acceptable for 6 accredited hours by the American Academy of General Practice. Tuition is $15, which includes the luncheon. For further information address the Division of Continuing Education, Vanderbilt University School of Medicine, Nashville, 37203.

★

The Departments of Pediatrics, Medicine, and Preventive Medicine will present a three-day postgraduate course, November 11-13, entitled "A Symposium on Infectious Diseases—Family Infections." This Symposium will be focused on selected problems in diagnosis, treatment and prevention of infections which may affect all ages within a family. The subject matter will fall into the categories of Enteric Viruses and Gram-negative Bacilli, Respiratory Viruses—Streptococci and Staphylococci, and *Histoplasma capsulatum* and Atypical Mycobacteria. The Faculty of Vanderbilt University School of Medicine will be assisted by visiting lecturers: Dr. Dorothy Horstmann of Yale University; Dr. Warren F. Wheeler of the University of Kentucky; Dr. George Jackson of the University of Illinois and Dr. Floyd Denny of the University of North Carolina.

This course is acceptable for 18 accredited hours by the American Academy of General Practice. Tuition is $60, which includes lunches. For further information address the Division of Continuing Education, Vanderbilt University School of Medicine, Nashville, Tenn. 37203.

Calendar of Meetings, 1964-65

State

Oct. 24-25 —Fourth Semiannual Institute of the Southeastern Group Psychotherapy Society, Knoxville

Nov. 4-6 —Annual Assembly of Tennessee Academy of General Practice, Gatlinburg Auditorium

Nov. 6 —East Tennessee Heart Association in conjunction with TAAGP, Gatlinburg

Nov. 11-13 —Family Infections—Vanderbilt University School of Medicine, Nashville

Nov. 19 —140th Semiannual Meeting, Middle Tennessee Medical Association, Cookeville

Regional

Nov. 6-7 —Ninth Annual Conference on "Recent Advances in the Diagnosis of Cancer, M. D. Anderson Hospital, Houston, Texas

Nov. 16-18 —Medical Society of District of Columbia, Statler-Hilton Hotel, Washington, D. C.

Nov. 16-19 —Southern Medical Association 58th Annual Meeting, Memphis

Dec. 8-10 —Southern Surgical Association, Boca Raton Hotel, Boca Raton, Fla.

Jan. 25-27, 1965—Southern Radiological Conference, Grand Hotel, Point Clear, Alabama

Oct. 30-31 —First National Conference on Health Education Goals, Sheraton-Chicago Hotel

Nov. 7-8 —AMA sponsored 15th National Conference on Disaster Medical Care, La Salle Hotel, Chicago

National

Nov. 28-29 —American College of Chest Physicians (Interim Meeting), Fontainebleau Hotel, Miami Beach, Fla.

Nov. 28-29 —AMA First National Conference on Areawide Health Facilities Planning, Americana Hotel, Bal Harbour, Fla.

Nov. 29-Dec. 2—American Medical Association (Clinical Meeting), Auditorium Exposition Hall, Miami Beach, Fla. and Americana Hotel, Bal Harbour, Fla.

Jan. 9-14, 1965—American Academy of Orthopaedic Surgeons, Americana Hotel, New York (members and invited guests only)

Jan. 27-31 —Neurosurgical Society of America, The Americana Hotel, San Juan

Feb. 5-10 —Congress on Medical Education, Palmer House, Chicago

Feb. 10-13 —American College of Radiology (members only), Bellevue-Stratford Hotel, Philadelphia

Feb. 13-17 —American Academy of Allergy, Americana Hotel, Bal Harbour, Fla.

Feb. 15-17 —American College of Surgeons (sectional meeting), Bellevue-Stratford Hotel, Philadelphia

Feb. 17-21 —American College of Cardiology, Statler-Hilton Hotel, Boston

Feb. 25-Mar. 2—American Dermatological Association, Boca Raton Hotel, Boca Raton, Fla.

Tennessee Chapter American College of Surgeons

The 1964 interim meeting of the Tennessee Chapter of the American College of Surgeons will be held Saturday, October 24th at Vanderbilt University School of Medicine, Nashville. The following scientific program will be presented: "Diagnosis and Treatment of Esophageal Perfora-

tion"—Dr. Rollin A. Daniel; "Malignant Melanoma"—Dr. Barton McSwain; "Chordotomy—Indications and Expectations"—Dr. William Meacham; "Thrombectomy in Ilio-Femoral Thrombosis"—Dr. John Sawyers; "Phlegmasia Cerulea Dolens—Experimental and Clinical"—Dr. Stanley Brockman; "Anterior Approach to Herniated Nucleus Pulposus"—Dr. Ben Fowler; "New Concepts—Report on ACS Meeting in Chicago"—Dr. James O'Neill, Resident in Surgery; "Urethral Recession"—Dr. John Burch; "The Hunt-Lawrence Pouch as a Gastric Substitute" (Movie)—Dr. H. William Scott, Jr.; "Renal Hypertension, Diagnosis and Treatment"—Dr. John H. Foster; and "Reconstructive Common Duct Surgery"—Dr. James A. Kirtley.

Guest speaker will be Dr. James Hardy, Professor of Surgery, University of Mississippi. His topic will be "Management of Hypoxia in Surgical Patients." Following the scientific sessions, a dinner will be held at 6:00 P.M. at Richland Country Club.

Chest Physicians Announce 1965 Essay Contest

The American College of Chest Physicians offers three cash awards for the best essay prepared by undergraduate medical students on any phase of the diagnosis and/or treatment of chest diseases (heart or lungs). First prize will be $500; second, $300; and third $200. Each winner will also receive a certificate of merit. A trophy inscribed with the name of the winner and the name of his school will be presented to the winner's school. Winners will be announced at the 31st annual meeting of the American College of Chest Physicians, to be held at the Waldorf-Astoria Hotel, in New York City, June 17-21, 1965. The official application form may be secured by writing Mr. Murray Kornfeld, Executive Director, American College of Chest Physicians, 112 East Chestnut Street, Chicago, Ill. 60611.

AMA Conference on Blood and Blood Banking

The Conference will be held Dec. 11-12, at the Drake Hotel in Chicago. The objective of the conference is to motivate the medical profession to evaluate and implement blood banking requirements and to participate generally in local blood banking affairs. The theme of the conference will be "Blood Banking—Medical Evaluation and Participation." Further information may be obtained from the Department of Environmental Health, American Medical Association, 535 N. Dearborn Street, Chicago.

National Stroke Congress

An intensive course to assist in the Prevention, Management and Rehabilitation of a major medical problem, the stroke patient, will be held at the Palmer House in Chicago, Oct. 29-31. The Congress is sponsored by the American Heart Association, American Medical Association, Heart Disease Control Program of the U. S. Public Health Service, and Vocational Rehabilitation Administration. For additional information write to: National Stroke Congress, 535 North Dearborn Street, Chicago, Illinois 60610.

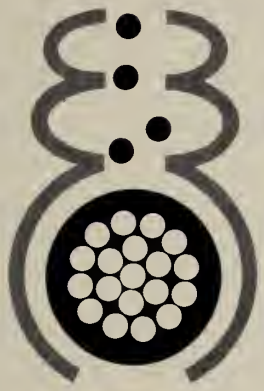
John C. Lynn, Legislative Director of the American Farm Bureau Federation, told the committee in a submitted statement that farmers' opposition to increasing Social Security taxes to pay for medical costs in any of their various forms is of long standing. He said of King-Anderson:

(1) It would make radical changes in our present system in transferring to an already over-centralized, over-obligated central government responsibilities that can be handled better in other ways.

(2) Enactment of legislation as proposed in S.880 would impose immediate federal control in certain areas and would undoubtedly lead to extension of government controls to other services.

(3) Financing medical care for the aged through a tax and the mechanism of Social Security would not provide "prepaid insurance" in the usual meaning of the term.

(4) Increasing the Social Security tax to provide medical assistance would be burdensome to the self-employed farmer and impose additional controls which he resents. *(From the Senate Committee Hearings)*



LOMOTIL®

Each tablet and each 5 cc. of liquid contains:
diphenoxylate hydrochloride . . . . . 2.5 mg.
(Warning: May be habit forming)
atropine sulfate . . . . . 0.025 mg.

- lowers motility promptly
- relieves spasm promptly
- stops diarrhea promptly

Lomotil fulfills the first order of treatment in most patients with diarrhea — prompt symptomatic control.

Pending discovery of the cause, early cessation of diarrhea is almost always urgently indicated. Prompt symptomatic control averts distress, dehydration and, frequently, severe exhaustion.

Both experimental and clinical evidence indicates that Lomotil exerts such control efficiently, safely and with maximal promptness.

dosage:

The recommended initial *adult* dosage is two tablets (2.5 mg. each) three or four times daily, reduced to meet the requirements of each patient as soon as the diarrhea is controlled. Maintenance dosage may be as low as two tablets daily. *Children's* daily dosage (in divided doses) varies from 3 mg. for a child of 3 to 6 months, to 10 mg. for one 8 to 12 years of age.

cautions and side effects:

Lomotil is an exempt narcotic; its abuse liability is low and comparable to that of codeine. Recommended dosages should not be exceeded. Side effects are relatively uncommon but among those reported are gastrointestinal irritation, sedation, dizziness, cutaneous manifestations, restlessness and insomnia. Lomotil should be used with caution in patients with impaired liver function and in patients taking addicting drugs or barbiturates.

Lomotil is a brand of diphenoxylate hydrochloride with atropine sulfate; the subtherapeutic amount of atropine is added to discourage deliberate overdosage.

SEARLE

Research in the Service of Medicine

Professional Liability Insurance
(MALPRACTICE)
Policy and Rates Approved
by the
TENNESSEE MEDICAL ASSOCIATION



Standard Coverage That SAVES YOU 35%

Class 1—Physicians doing no surgery

Class 2—Physicians doing minor surgery or assisting in major surgery on own patients

Class 3—Surgeons - General Practitioners who perform major surgery or assist in major surgery on other than their own patients and specialists: Anesthesiologists, Cardiologists (including catheterizations, but not including surgery), Ophthalmologists and Proctologists

Class 4—Surgeons - Specialists

Limits	Class 1	Class 2	Class 3	Class 4
5/15	$ 37.05	$ 46.15	$ 89.05	$133.25
10/30	50.02	62.30	120.22	179.89
25/75	63.36	78.92	152.28	227.86
50/150	70.02	87.22	168.30	251.84
75/225	74.10	92.30	178.10	266.50
100/300	76.32	95.07	183.44	274.50
200/300	79.66	99.22	191.46	286.49
300/300	81.88	101.99	196.80	294.48
200/500	88.77	108.61	202.13	298.49
500/500	93.59	114.61	213.71	315.81
500/1 million	114.70	135.99	236.37	339.81
1 million/1 million	120.25	142.91	249.73	359.79

1. Partnership liability, increase premium for each partner by 20%.
2. X-Ray Therapy and Shock Therapy quotations made on request.
3. Premises Liability (bodily injury, property damage and medical payments) Minimum premium $8.00.

FARRINGER & CO.
Phone 524-7335
Knoxville, Tennessee

FARRINGER & CO.
Phone 276-7331
Memphis, Tennessee

FAW & SHERROD
Phone 926-8164
Johnson City, Tennessee

INGLE-KNOX INSURANCE AGENCY
Phone 265-4541
Chattanooga, Tennessee

LIPSCOMB & PITTS CO.
Phone 272-2515
Memphis, Tennessee

Your policy backed by Assets over **$42,000,000.00**

Shelby Mutual Insurance Company
of Shelby, Ohio

*20% off on Hospital—Professional Liability

For Information on Hospital-Professional Liability and other coverages, please contact one of the agents listed.



Outwardly calm...but what goes on inside?

Appearances on the outside do not necessarily suggest what goes on inside. This is particularly true of the ulcer patient, who may appear jolly and unruffled to his neighbors, but presents to you the classic symptoms: organic and functional disorders of the G.I. tract, associated with anxiety and tension.

Consider, when you see him next, the value of PATHILON® SEQUELS® with Phenobarbital, which provides sustained anticholinergic protection from spasm and pain in the target areas, as well as sustained phenobarbital action against triggering anxiety. The controlled release of the active ingredients in the SEQUELS® formulation means protective medication day and night.

Effective in peptic ulcer, intestinal colic, ileitis, esophageal spasm, spastic colon, alcohol-induced G.I. upsets, gastric hypermotility and anxiety neurosis with G.I. symptoms. Should be used as adjunct to other measures.

Side Effects (due to tridihexethyl chloride): dry mouth, blurring of vision, constipation.

Contraindications: urinary bladder neck obstruction; glaucoma; obstructive congenital anomalies of the gastrointestinal tract; pyloric obstruction; congenital megacolon; and stenosing gastric or duodenal ulcer with significant gastric retention.

Also available, without phenobarbital, as PATHILON® Tridihexethyl chloride SEQUELS® 75 mg.

Pathilon® Sequels® with Phenobarbital Sustained Release Capsules

Each capsule contains: Tridihexethyl chloride, 75 mg., and phenobarbital, 45 mg.

LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, New York

Lederle

313-4

Remember, Doctor—

It's been

Tafel Surgical Supply Co., Inc.

SINCE 1889

for

Drugs, Orthopedic, Surgical

Supplies & Equipment

1203 Church Street

Nashville, Tennessee

NEEDED GENERAL PHYSICIAN

Family Internist by four man group in growing rural program in West Virginia. Modern Clinic facilities, regularly visiting specialist consultant staff, scheduled training and vacation periods, foundation sponsorship, no investment required. Starting net income range $14,000-$18,000 depending on qualifications.

For Full Particulars Write Box 700 This Journal



- PETN (pentaerythritol tetranitrate) to increase oxygen supply
- plus meprobamate to decrease anxiety and tension

Unlike phenobarbital, meprobamate is *not* cumulative and does *not* cause depression.

Side effects: Pentaerythritol tetranitrate may infrequently cause nausea and mild headache, usually transient. Slight drowsiness may occur with meprobamate and, rarely, allergic reactions. **Precautions:** Meprobamate may increase effects of excessive alcohol. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction. **Contraindications:** Like all nitrate-containing drugs, 'Miltrate' should be given with caution in glaucoma. *Complete product information available in the product package, and to physicians upon request.* **Dosage:** 1 to 2 tablets, *before meals* and at bedtime. Individualization required. **Supplied:** Bottles of 50 tablets.

CML-1055

MILTRATE®

meprobamate 200 mg. + pentaerythritol tetranitrate 10 mg.

WALLACE LABORATORIES / *Cranbury, N. J.*

REFER EYE PATIENTS
TO AN
EYE PHYSICIAN

By so doing, you will be assured of a complete diagnosis of your patients' eyes.

Guild Opticians complete the cycle for Professional Service.

GUILD OF PRESCRIPTION OPTICIANS OF AMERICA

BE SAFE—BE SURE

SEE

YOUR GUILD OPTICIAN

FOR

THE BEST SERVICE

EYE PHYSICIANS: Please Note—

Your prescriptions for glasses are "SAFE" when referred to a Guild Optician. Bound by the code of Ethics to uphold the highest standards in optical service.

APPALACHIAN HALL
Established 1916

Asheville North Carolina



An Institution for the diagnosis and treatment of Psychiatric and Neurological illnesses, rest, convalescence, drug and alcohol habituation.
Insulin Coma, Electroshock and Psychotherapy are employed. The Institution is equipped with complete laboratory facilities including electroencephalography and X-ray.
Appalachian Hall is located in Asheville, North Carolina, a resort town, which justly claims an all around climate for health and comfort. There are ample facilities for classification of patients, rooms single or en suite.

WM. RAY GRIFFIN, JR., M.D.
ROBERT A. GRIFFIN, M.D.
MARK A. GRIFFIN, SR., M.D.
MARK A. GRIFFIN, JR., M.D.

For rates and further information write
Appalachian Hall, Asheville, N. C.



YOU:

HISTORY: 20 years of study, plus internship/residency. Substantial investment in professional location, equipment. **SIGNS and SYMPTOMS:** Reports that large home, growing family and minimal professional standard of living are a concern. Still ahead—college costs, retirement, natural estate ambitions. **PROGNOSIS:** Needs 15-20 peak years of income to pay off education, home; rear family; retire. All this while battling tough taxes, and without the benefit of social security or company paid life and disability insurance, pension plan. **TREATMENT:** Learn about Mutual Benefit Life's "Seven Significant Benefits". Talk with a M.B.L. representative. See how a built-for-you plan solves specific problems through unique disability clauses, unusually high cash and loan values, liberal survivor income options—and more. Write on your own professional letterhead for exclusive report covering a full range of typical insurance requirements for physicians. Just ask for a copy of *Consultant's Report*.

Those who plan ahead get ahead **MUTUAL BENEFIT LIFE** INSURANCE COMPANY, NEWARK, NEW JERSEY

CARRIER OF YOUR TENNESSEE MEDICAL ASSOCIATION GROUP LIFE INSURANCE PLAN

EDWARD C. DUNN	SETH W. SIZER	THERON M. LEMLY
1104 Sudekum Bldg.	1211 James Bldg.	1309 Poplar Ave.
Nashville, Tenn.	Chattanooga, Tenn.	Memphis, Tenn.



Doctor, you can take it with you!



THE BURDICK EK-III **DUAL-SPEED ELECTROCARDIOGRAPH**

- 26½ pounds light, including all accessories and carrying case! Ideal for office or bedside use
- 25 or 50 mm. speed — an accurate record for an accurate diagnosis
- frequency response greatly in excess of minimum A.M.A. standards
- top-loading paper drive eliminates tedious paper-threading adjustments

Burdick

THE BURDICK CORPORATION
MILTON, WISCONSIN
Branch Offices: New York • Chicago • Atlanta • Los Angeles
Dealers in all principal cities

KAY SURGICAL, INC.
1144 Madison Ave. Memphis, Tenn.

Gyne-Cytology Laboratory, Inc.
M. Wm. Rubenstein, M.D.
(PAPANICOLAOU METHOD)
RAPID SERVICE
Mailing Kits On Request
Suite 422 - 636 Church Street
EVANSTON, ILLINOIS 60201

PATRONIZE
OUR
ADVERTISERS

Wanted:
Male Psychiatrist

Opening for a Board Eligible or Board Certified Psychiatrist to Join a well-established group.

Ideal work conditions in a 145-bed active treatment hospital serving several Southeastern states.

Professional freedom. Good living conditions.

Starting salary—$20,000-25,000

For Full Particulars Write Box 300 This Journal



A SURGICAL INSTRUMENT OIL

Scientifically Developed for the

MEDICAL PROFESSION

Apply as indicated; a few drops especially in locks and serrations of instruments, or other delicate mechanisms. Leave a thin film over the entire instrument to prevent rust in disuse or storage. This highly refined clear instrument oil will not clog, gum or turn rancid. Non-corrosive.

4-oz. can . . . 75c
Pt. bottle with dispensing can . . . $2.50
Qt. bottle with dispensing can . . . $4.00
Plus post.

White Surgical Supply Co.
SURGICAL SUPPLIES & ACCESSORIES
515 West Church Ave. Knoxville 7, Tennessee
Telephone 3-1186

House Officer

Immediate opening for permanent or temporary. Accredited 400 bed General Hospital in greater Memphis Metropolitan Medical Center. Good working conditions. Excellent salary. Apply E. J. Spiotta, M.D., Director Medical Education, St. Joseph Hospital, 220 Overton Avenue, Memphis, Tennessee.

ACCEPTED AMERICAN MEDICAL ASSN.

HOMOGENIZED
VITAMIN D MILK
PRODUCES SOFT CURD
(400 U.S.P. Units Vitamin D
Per Quart)

"A" Grade

Sealtest MILK

Phone
AL 5-6451

Fortified Fat Free Milk
(2000 Units Vitamin A—400 Units Vitamin D)
NASHVILLE PURE MILK CO.

Murfreesboro—Vacancies

STAFF PHYSICIAN for 1275 bed Neuropsychiatric Hospital, including 350 general medical and geriatric. Modern facilities for diagnosis and treatment of mental illness. Salary $12,075 to $21,590 depending on qualifications; fringe benefits; cost of moving to Murfreesboro will be paid by Veterans Administration; visit here for evaluation can be arranged at our expense. Excellent educational opportunities for students in this area. Contact Director, Veterans Administration Hospital, Murfreesboro, Tennessee.

STATEMENT OF OWNERSHIP, MANAGEMENT AND CIRCULATION (Act of October 23, 1962 Section 4369, Title 39, United States Code) — Publisher, File two copies of this form with your postmaster

1. DATE OF FILING: September 9, 1964
2. TITLE OF PUBLICATION: JOURNAL OF THE TENNESSEE MEDICAL ASSOCIATION
3. FREQUENCY OF ISSUE: MONTHLY
4. LOCATION OF KNOWN OFFICE OF PUBLICATION (Street, city, county, state, ZIP code): 112 Louise Avenue, Nashville, Davidson, Tenessee - 37203
5. LOCATION OF THE HEADQUARTERS OR GENERAL BUSINESS OFFICES OF THE PUBLISHERS (Not printers): 112 Louise Avenue, Nashville, Tennessee
6. NAMES AND ADDRESSES OF PUBLISHER, EDITOR, AND MANAGING EDITOR

PUBLISHER (Name and address): Tennessee Medical Association, 112 Louise Avenue, Nashville, Tennessee

EDITOR (Name and address): R. N. Kampmeier, M.D., B-4211, Vanderbilt University Nospital, Nashville, Tennessee

MANAGING EDITOR (Name and address): J. E. Ballentine, 112 Louise Avenue, Nashville, Tennessee

7. OWNER (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding 1 percent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a partnership or other unincorporated firm, its name and address, as well as that of each individual must be given.)

NAME	ADDRESS
Tennessee Medical Association	112 Louise Avenue, Nashville, Tennesaee

8. KNOWN BONDHOLDERS, MORTGAGEES, AND OTHER SECURITY HOLDERS OWNING OR HOLDING 1 PERCENT OR MORE OF TOTAL AMOUNT OF BONDS, MORTGAGES OR OTHER SECURITIES (If there are none, so state)

NAME	ADDRESS

9. Paragraphs 7 and 8 include, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, also the statements in the two paragraphs show the affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner. Names and addresses of individuals who are stockholders of a corporation which itself is a stockholder or holder of bonds, mortgages or other securities of the publishing corporation have been included in paragraphs 7 and 8 when the interests of such individuals are equivalent to 1 percent or more of the total amount of the stock or securities of the publishing corporation.

10. THIS ITEM MUST BE COMPLETED FOR ALL PUBLICATIONS EXCEPT THOSE WHICH DO NOT CARRY ADVERTISING OTHER THAN THE PUBLISHER'S OWN AND WHICH ARE NAMED IN SECTIONS 132.231, 132.232, AND 132.233 POSTAL MANUAL (Sections 4355a, 4355b, and 4356 of Title 39, United States Code)

	AVERAGE NO. COPIES EACH ISSUE DURING PRECEDING 12 MONTHS	SINGLE ISSUE NEAREST TO FILING DATE
A. TOTAL NO. COPIES PRINTED (Net Press Run) 38,400	3200	September - 3200
B. PAID CIRCULATION 1. TO TERM SUBSCRIBERS BY MAIL, CARRIER DELIVERY OR BY OTHER MEANS	2924	2924
2. SALES THROUGH AGENTS, NEWS DEALERS OR OTHERWISE	15	15
C. FREE DISTRIBUTION (including samples) BY MAIL, CARRIER DELIVERY OR BY OTHER MEANS	261	261
D. TOTAL NO. OF COPIES DISTRIBUTED (Sum of lines B1, B2 and C)	3200	3200

I certify that the statements made by me above are correct and complete. (Signature of editor, publisher, business manager, or owner) J. E. Ballentine

POD Form 3526 (Aug 1963)



Whether you're a teacher correcting exams. A student cramming for them. A housewife cleaning up after the kids. Or a businessman working late at night. Whoever you are, things go better when you pause and refresh with ice-cold Coca-Cola.



Out-Patient Clinic and Offices

HILL CREST SANITARIUM

Established in 1925

FOR NERVOUS AND MENTAL DISEASES
AND ADDICTION PROBLEMS

Tennessee Medical Association's

Exclusively Approved

GROUP DISABILITY INCOME PROGRAM

Administered By

Smith, Reed, Thompson & Ellis Co.

1322 Nashville Trust Building
NASHVILLE 3, TENNESSEE
Phone 255-7625

WILLIAM H. ELLIS, C. L. U. MGR.
THOMAS G. HENRY

ASSOCIATES

Alden H. Smith, C. L. U.

Arthur D. Reed, C. L. U.

Joe Thompson, Jr., C. L. U.

Alden H. Smith, Jr., C. L. U.

E. Dan Smith, II

Underwritten By

Commercial Insurance Company

Newark, New Jersey

PLACEMENT SERVICE

The Placement Service of the Tennessee Medical Association is designed to assist both doctors and communities. Further information and contacts, to both physicians and communities, is available from the Public Service Office, 112 Louise Avenue, Nashville, Tennessee—telephone 291-4584.

Locations Wanted

GENERAL PRACTITIONER, age 42, graduate of Oklahoma School of Medicine, would like assistant, clinical, industrial or insurance practice in any community in Tennessee. Now in private practice but would like to relocate for better educational opportunities for children. Married. Protestant. Available within 30 days. LW-493

◆

INTERNIST, Board eligible, 54 years of age, native Tennessean, graduate of the University of Tennessee College of Medicine, would like to relocate to Tennessee. Married. Methodist. Prefers industrial, institutional, or public health practice. No preference as to size or location. Available immediately. LW-500

◆

GENERAL SURGEON, 33 years of age, graduate of the University of Tennessee College of Medicine, would like practice in East Tennessee city of 10,000 plus. Now in general practice with general surgery. Board qualified. Married. Episcopalian. Available upon notice. LW-521

◆

INTERNIST, 29 years of age, graduate of the George Washington School of Medicine, would like assistant, associate or clinical practice in East or Middle Tennessee city of 15,000 to 400,000. Native Tennessean. Married. Protestant. Available July 1965. LW-523

◆

OPHTHALMOLOGIST, 31 years of age, graduate of the University of Tennessee College of Medicine, would like associate or clinical practice in Middle or West Tennessee area 30,000 plus population. Married. Methodist. Now in residency. Available June 30, 1965. LW-543

◆

GENERAL SURGEON, 33 years of age, graduate of the University of Tennessee College of Medicine, now in 7th year of residency, would like associate practice in any area of Tennessee with 10,000 plus population. Tennessee license. Married. Protestant. Available July 1, 1965. LW-544

◆

OB-GYN, age 28 years of age, graduate of the University of Arkansas School of Medicine, would like associate practice in Middle or West Tennessee area with population of 20,000 plus. Now in residency. Single. Presbyterian, Tennessee license. Board eligible. Available July 1965. LW-545

◆

OB-GYN, 30 years of age, graduate of the Hohnemann Medical College, would like associate practice in any area of Tennessee with 25,000 plus population. Board eligible; married; Baptist. Now in residency. Available March 1, 1965. LW-546

◆

OB-GYN, 35 years of age, graduate of the University of Tennessee College of Medicine, would like assistant, associate or clinical work in any section of Tennessee with 25,000 plus population. Married. Church of Christ. Tennessee license; Board certified. Available immediately. LW-547

GENERAL SURGEON (will do general practice also), 40 years of age, graduate of the University of Tennessee College of Medicine, would like associate practice in West or Middle Tennessee town with 10,000 plus. Married. Baptist. Tennessee license; Board certified. Available four weeks from notification. LW-548

Physicians Wanted

GENERAL PRACTITIONER needed in small North Tennessee town. No other physician in county. Town approved for Sears-Roebuck Foundation assistance in building clinic. Support of business men, civic organizations and city officials assured. PW-177

◆

GENERAL PRACTITIONER needed in small upper-East Tennessee community to replace retired physician. Housing and office space available. Near large industrial area. PW-185

◆

PHYSICIAN needed in Middle Tennessee town of 7,500. Well built clinic building available. Active support of county, town officials, and civic organizations. Near recreational area. No other physician in town. PW-195

◆

ASSISTANT GENERAL PRACTITIONER with experience in Ob-Gyn and/or surgery needed in Middle Tennessee town of 12,000. Eighteen bed hospital-clinic. Will furnish office space, utilities and equipment. Age required, 30-45; person with high morals; non-drinker. PW-200

◆

INTERNIST needed as assistant in West Tennessee city of 15,000. Well established and equipped office. Age 25-35. Hospital practice required. Area an agricultural and industrial one. Excellent opportunity. PW-203

◆

INTERNIST or GENERAL PRACTITIONER to be associated with clinic group; adjoining general hospital. Town 12,000 to 15,000 population. Located near major metropolitan area. PW-211

◆

INTERNIST needed. Will furnish a modern, air-conditioned office at no charge, requiring only that substitution be made on days off and on vacation. Located in West Tennessee metropolis; good practice. After one year, reasonable arrangements for continuing practice will be made if desired. PW-212

◆

GENERAL PRACTITIONER needed as replacement in West Tennessee town of over 4,500. Agricultural and industrial area. Housing, office space and equipment available. Hospital of 40 beds located in town. PW-213

◆

GENERAL PRACTITIONER to associate with same in scientific community of 30,000. Well established practice with office located across the street from new hospital. Prefer recent graduate. PW-215

◆

ASSOCIATE for general practice with a group in Middle Tennessee is needed. Excellent clinic and hospital facilities. Starting salary $1,500 per month. PW-216

A SYMPOSIUM ON INFECTIOUS DISEASES

November 11, 12, 13, 1964

To focus on selected problems in diagnosis, treatment and prevention of infections which may affect all ages within a family:

Enteric Viruses and Gram-negative Bacilli
Respiratory Viruses, Streptococci and Staphylococci
Histoplasma Capsulatum and Atypical Mycobacteria

By the faculty of VANDERBILT UNIVERSITY SCHOOL OF MEDICINE assisted by the following distinguished visitors:

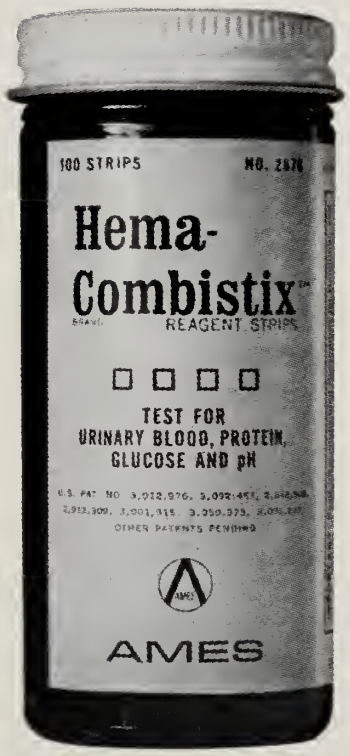
Dr. Dorothy Horstmann—Yale University
Dr. Warren E. Wheeler—University of Kentucky College of Medicine
Dr. George Jackson —University of Illinois College of Medicine
Dr. Floyd Denny —University of North Carolina School of Medicine

For information write:
Director of Continuing Education
B-4211 Vanderbilt University School of Medicine
Nashville, Tennessee 37203

Registration Fee—$60.00

List of Advertisers in This Issue

American Cyanamid Company VI, VII, XII, XVIII, XXVI, XXVII, XXIX, XXXIII
Ames Co., Inc. XLIII
Appalachian Hall XXXV
Brayten Pharmaceutical Co. XXIV
Burroughs Wellcome & Co. XIV
Coca-Cola XXXIX
Farringer & Company XXXII
Guild Opticians XXXV
Gyne-Cytology Laboratory, Inc. XXXVII
Hill Crest Sanitarium XXXIX
House Officer XXXVIII
Kay Surgical, Inc. XXXVII
Lilly, Eli and Co. I, XXX
Mutual Benefit Life Ins. Co. XXXVI
Nashville Pure Milk Co. XXXVIII
Nashville Surgical Supply Co., Inc. XXVIII
Parke-Davis and Company II
Pfizer Laboratories XIII, XV, XVI, XVII
Physician, General XXXIV
Poythress, William F. & Company XXII
Procter & Gamble Insert
Placement Service XLI
Psychiatrist Wanted XXXVII
Robins, A. H. Co. IX, XXI
Roche Laboratories XLIV
St. Albans XXIII
Saunders, W. B. Co. III
Searle, G. D. & Co. XXXI
Smith, Kline & French Laboratories VIII
Smith, Reed, Thompson & Ellis Co. XL
Symposium on Infectious Diseases XLII
Tafel Surgical Supply Co., Inc. XXXIV
VA Hospital, Murfreesboro XXXVIII
Wallace Laboratories X, XI, XXV, XXXIV
White Surgical Supply Co. XXXIX
Winthrop Laboratories V



WARNING: MAY BE HABIT-FORMING

Once you have used **HEMA-COMBISTIX,**™ dip-and-read test for urinary blood, protein, glucose, and pH, it may become a habit to test every patient's urine routinely with this simple, convenient reagent strip. Most of the answers will be "negatives," but an unexpected "positive" may alert you to serious pathology even before related symptoms appear. The test takes only 60 seconds. As basic as the stethoscope... **HEMA-COMBISTIX** is a *good* habit to form. □ Ames Company, Inc., Elkhart, Indiana. 68764

AMES
AMES

When psychic tension mounts

Valium® (diazepam)

useful in alleviating

- –psychic tension mixed with depressive symptoms
- –psychic tension in the common psychoneuroses
- –psychic tension intensified by concomitant somatic disorders





How to prescribe Valium (diazepam)

Indications: Valium (diazepam) is of use in dealing with anxiety reactions stemming from stressful circumstances or whenever somatic complaints are concomitants of emotional factors. It is useful in psychoneurotic states manifested by anxiety, tension, fear and fatigue.

Valium (diazepam) may also be useful in acute agitation due to alcohol withdrawal.

Valium (diazepam) may be of use to alleviate muscle spasm associated with cerebral palsy and athetosis.

Dosage and administration	*Usual daily dose*
Mild to moderate psychoneurotic reactions: Manifested by anxiety-tension alone or with depressive symptomatology, agitation, restlessness, psychophysiological disturbances	2 mg to 5 mg, 2 or 3 times daily
Severe psychoneurotic reactions: Where severe anxiety, fear, agitation, aggression or hostility exist alone or with depressive symptoms	5 mg to 10 mg, 3 or 4 times daily
Alcoholism: As an aid in symptomatic relief of acute agitation, tremor, impending or acute delirium tremens and hallucinosis	10 mg, 3 or 4 times during the first 24 hours; reducing to 5 mg, 3 or 4 times daily as needed
Muscle spasm associated with cerebral palsy or athetosis	2 mg to 10 mg, 3 or 4 times daily

Contraindications: Valium (diazepam) is contraindicated in infants, patients with a history of convulsive disorders or patients with a history of glaucoma.

Warning: Valium (diazepam) is not of value in dealing with psychotic patients manifesting anxiety and should be avoided when there is reason to believe the patient is psychotic.

Precautions: In elderly or debilitated patients, it is important to limit the dosage to the smallest effective amount to preclude the development of ataxia or oversedation (not more than 1 mg, 1 or 2 times daily initially, to be increased gradually as needed and tolerated). As is true of all CNS-acting drugs, until the correct maintenance dosage is established, patients receiving Valium (diazepam) should be advised against possibly hazardous procedures requiring complete mental alertness or physical coordination. Driving an automobile during the period of Valium (diazepam) therapy is not recommended. In general, the concurrent administration of Valium (diazepam) and other psychotropic agents is not recommended. If such combination therapy is used, careful consideration should be given to the pharmacology of the agents to be employed with Valium (diazepam)—particularly with known compounds which may potentiate the action of Valium (diazepam), such as phenothiazines, barbiturates, MAO inhibitors and other antidepressants.

Since Valium (diazepam) has a central nervous system depressant effect, patients should be advised against the simultaneous ingestion of alcohol and other central nervous system depressant drugs during Valium (diazepam) therapy. Safe use of Valium (diazepam) during pregnancy has not been established. The usual precautions are indicated when Valium (diazepam) is used in the treatment of anxiety states where there is any evidence of impending depression; particularly the recognition that suicidal tendencies may be present and protective measures may be necessary. The usual precautions in treating patients with impaired renal or hepatic function should be observed.

Side effects: In clinical use, fatigue, drowsiness and ataxia have been reported; in most instances these are dose-related and may be avoided by proper dosage adjustment. Mild nausea and dizziness may occur on occasion. As with any new agent, when it is administered for protracted periods of time, periodic blood counts and liver function tests are advisable. Abrupt cessation after prolonged overdosage may, in some patients, produce withdrawal symptoms (*e.g.*, convulsions, tremor, abdominal and muscle cramps, vomiting, sweating) similar to those seen with barbiturates, meprobamate and Librium® (chlordiazepoxide HCl). Changes in EEG patterns have been observed in patients during and after Valium (diazepam) treatment.

Paradoxical reactions, such as excitement, depression, stimulation, sleep disturbances, acute hyperexcited states and hallucinations have been reported. Other side effects noted have been blurred vision, diplopia, headache, incontinence, slurred speech, tremor and skin rash.

Valium (diazepam) is available as 5-mg and 2-mg tablets. For convenience and economy in prescribing, both strengths are supplied in bottles of 50.

Roche Laboratories endorses the principle of caution in the administration of any therapeutic agent to pregnant patients.

ROCHE

ROCHE LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110

LIBRARY OF THE
RHODE ISLAND
MEDICAL SOCIETY

THE JOURNAL OF THE

TENNESSEE MEDICAL ASSOCIATION

SOUTHERN MEDICAL ASSOCIATION
58th Annual Meeting
Memphis, Tennessee
November 16-19, 1964

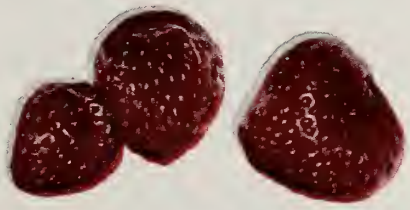
TENNESSEE MEDICAL ASSOCIATION
130th Annual Meeting
Read House, Chattanooga, Tennessee
April 11-13, 1965

NOVEMBER, 1964

Volume 57 **Number 11**

Table of Contents on Page IV
Index to Advertisers on Page XLVIII

tempting strawberry taste treat
for your iron-deficient patients

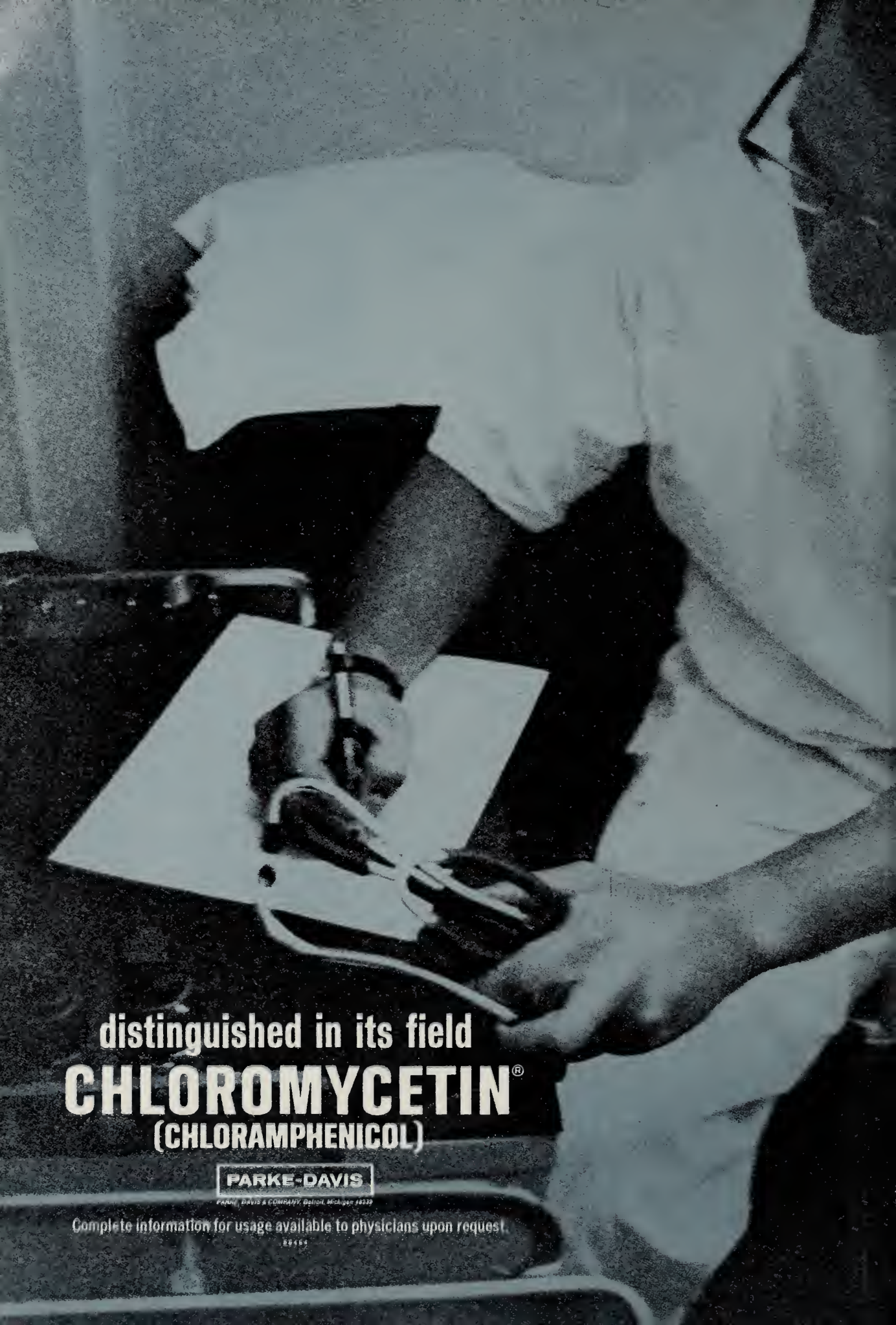


Zentron® Chewable
Iron, Vitamin B Complex, and Vitamin C
Combines iron with B complex vitamins in a chewable tablet

Additional information available upon request.
Eli Lilly and Company, Indianapolis 6, Indiana.

Lilly

400137


distinguished in its field
CHLOROMYCETIN®
(CHLORAMPHENICOL)
PARKE-DAVIS
PARKE, DAVIS & COMPANY, Detroit, Michigan 48232
Complete information for usage available to physicians upon request.
88454



ACHROCIDIN®

TETRACYCLINE HCl-ANTIHISTAMINE-ANALGESIC COMPOUND

Each Tablet contains:

ACHROMYCIN® Tetracycline HCl	125 mg.
Acetophenetidin (Phenacetin)	120 mg.
Caffeine	30 mg.
Salicylamide	150 mg.
Chlorothen Citrate	25 mg.

Each (5 cc.) Teaspoonful of Syrup (lemon-lime flavored) contains:

ACHROMYCIN® Tetracycline equivalent to Tetracycline HCl	125 mg.
Acetophenetidin (Phenacetin)	120 mg.
Salicylamide	150 mg.
Ascorbic Acid (C)	25 mg.
Pyrilamine Maleate	15 mg.
Methylparaben 4 mg.; Propylparaben	1 mg.

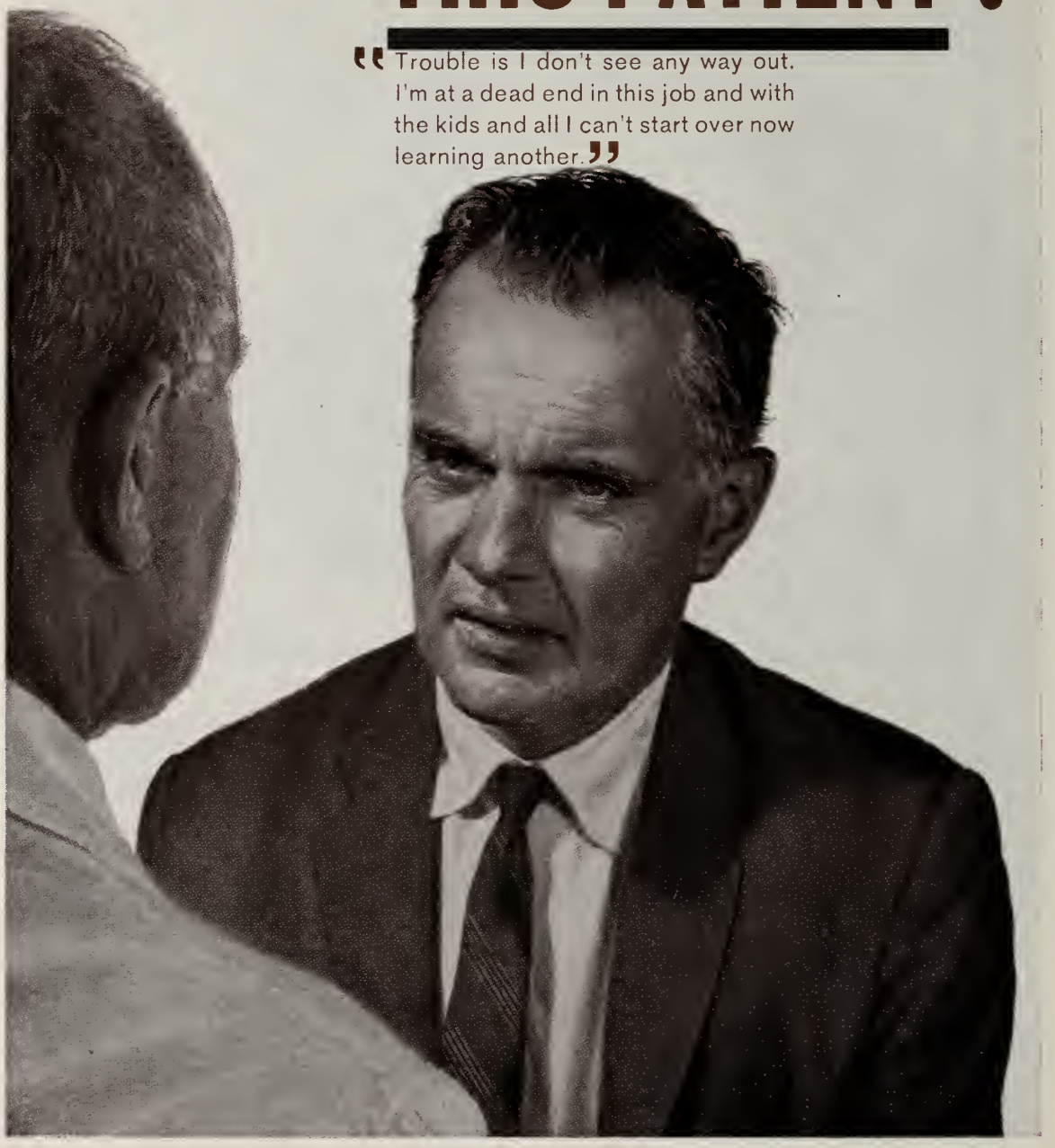
Effective in controlling tetracycline-sensitive bacterial infection and providing symptomatic relief in allergic diseases of the upper respiratory tract. Possible side effects are drowsiness, slight gastric distress, overgrowth of nonsusceptible organisms, tooth discoloration. The last named may occur only if the drug is given during tooth formation (late pregnancy, the neonatal period, early childhood). Average Adult Dosage: 2 Tablets or 2 Teaspoonfuls of Syrup four times daily. The total average daily dosage for children, determined by the tetracycline content, is 10 to 20 mg. per pound body weight, divided into four equal doses.

LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, New York
7143-3

Lederle

RECOGNIZE THIS PATIENT?

"Trouble is I don't see any way out. I'm at a dead end in this job and with the kids and all I can't start over now learning another."



Indications: Depression, both acute (reactive) and chronic, especially when the depression is accompanied by anxiety, insomnia, and related symptoms. **Contraindications:** Benactyzine hydrochloride is contraindicated in glaucoma. Previous allergic or idiosyncratic reactions to meprobamate contraindicate subsequent use. **Precautions:** Should administration of meprobamate cause drowsiness or visual disturbances, the dose should be reduced. Operation of motor vehicles or machinery or other activity requiring alertness should be avoided if these symptoms are present. Effects of excessive alcohol may possibly be increased by meprobamate. Prescribe cautiously and in small quantities to patients with suicidal tendencies. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction; withdraw gradually after prolonged use at high dosage. Abrupt withdrawal may precipitate recurrence of pre-existing symptoms, or withdrawal reactions including, rarely, epileptiform seizures. Grand mal seizures may be precipitated in persons suffering from both grand and petit mal **Side effects:** Side effects associated with 'Deprol' have consisted primarily of drowsiness and occasional dizziness, and infrequent skin rash and nausea. *Benactyzine hydrochloride* – Benactyzine hydrochloride, particularly in high dosage, may produce dizziness, thought-blocking, a sense of depersonalization, and a subjective feeling of muscle relaxation, as well as anticholinergic effects such as blurred vision, dryness of mouth, or failure of visual accommodation. Other reported side effects have included gastric distress, allergic response, ataxia, and euphoria.

When you recognize depression and anxiety traceable to an emotionally charged situation with no somatic disorder

—*start the patient on 'Deprol'*

Typical situations in which 'Deprol' is indicated:

marital or other family problems ■ death of a loved one ■ financial worries ■ fear of cancer, heart disease or other life-threatening illness ■ pre- and post-operative apprehensions ■ retirement problems, and many other stressful situations which cause the patient to feel a sense of loss, guilt or unworthiness

Advantages of 'Deprol'

1. By relieving both depression and anxiety, 'Deprol' lifts the mood of the depressed patient without the agitation and "jitters" that often accompany "energizer" therapy alone.
2. 'Deprol' restores normal sleep, relaxes physical tensions, and improves appetite.
3. 'Deprol' acts rapidly—patients often respond within a week or two.
4. 'Deprol' is relatively nontoxic and free of side effects.
5. When depression and anxiety accompany physical illness, 'Deprol' is compatible with drugs used to treat these organic conditions.

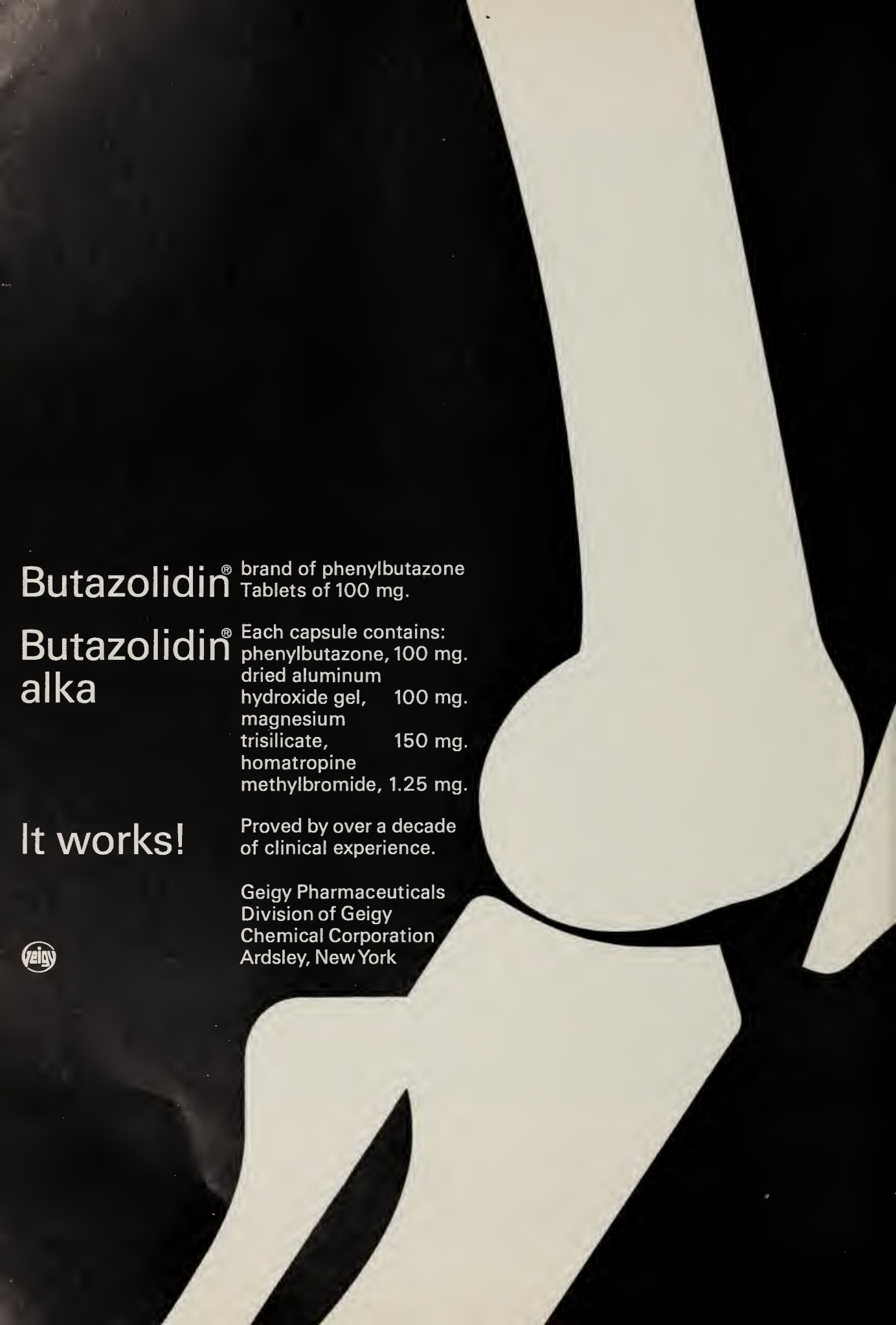
Deprol®

meprobamate 400 mg. + benactyzine hydrochloride 1 mg.

WALLACE LABORATORIES / *Cranbury, N. J.*

CD-3567

Meprobamate — Drowsiness may occur and, rarely, ataxia, usually controlled by decreasing the dose. Allergic or idiosyncratic reactions are rare, generally developing after one to four doses of the drug. Mild reactions are characterized by an urticarial or erythematous, maculopapular rash. Acute nonthrombocytopenic purpura with peripheral edema and fever, transient leukopenia, and a single case of fatal bullous dermatitis after administration of meprobamate and prednisolone have been reported. More severe and very rare cases of hypersensitivity may produce fever, chills, fainting spells, angioneurotic edema, bronchial spasm, hypotensive crises (1 fatal case), anuria, stomatitis, proctitis, and anaphylaxis. Treatment should be symptomatic and the drug not reinstituted. Isolated cases of agranulocytosis and thrombocytopenic purpura, and a single fatal instance of aplastic anemia have been reported, but only when other drugs known to elicit these conditions were given concomitantly. Fast EEG activity has been reported, usually after excessive meprobamate dosage. Massive overdosage may produce lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse. **Dosage:** Usual starting dose, one tablet three or four times daily. May be increased gradually to six tablets daily and reduced gradually to maintenance levels upon establishment of relief. Doses above six tablets daily are not recommended even though higher doses have been used by some clinicians to control depression and in chronic psychotic patients. **Supplied:** Light-pink, scored tablets, each containing meprobamate 400 mg. and benactyzine hydrochloride 1 mg. *Before prescribing, consult package circular*



Butazolidin® brand of phenylbutazone
Tablets of 100 mg.

Butazolidin® alka
Each capsule contains:
phenylbutazone, 100 mg.
dried aluminum hydroxide gel, 100 mg.
magnesium trisilicate, 150 mg.
homatropine methylbromide, 1.25 mg.

It works!
Proved by over a decade of clinical experience.

Geigy Pharmaceuticals
Division of Geigy Chemical Corporation
Ardsley, New York

Geigy



"Gesundheit!"

...is just for the sneeze

but for symptomatic relief of the common cold...

'EMPRAZIL'®

TABLETS

Each layered tablet contains:

'Sudafed'® brand Pseudoephedrine Hydrochloride	20 mg.
'Perazil'® brand Chlorcyclizine Hydrochloride	15 mg.
Phenacetin	150 mg.
Aspirin	200 mg.
Caffeine	30 mg.

To relieve the aches, pains, fever and respiratory congestion of the common cold, flu or grippe with one product ...specify 'Emprazil'.

Caution: While pseudoephedrine is virtually without pressor effect in normotensive patients, it should be used with caution in hypertension. Also, while chlorcyclizine has a low incidence of antihistaminic drowsiness, the usual precautions should be observed.

Supplied: Bottles of 100 and 1000.

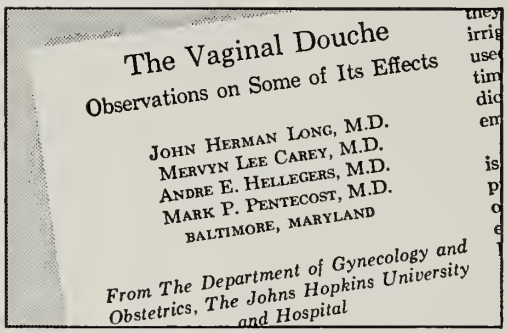
Also available with codeine—on prescription only—as **'EMPRAZIL-C'®** tablets

Complete literature available on request from Professional Services Dept. PML.

BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, N.Y.

A Valuable Contribution To Medical Literature

A DEFINITIVE STUDY ON DOUCHING



The Vaginal Douche

Observations on Some of Its Effects

JOHN HERMAN LONG, M.D.
MERVYN LEE CAREY, M.D.
ANDRE E. HELLEGERS, M.D.
MARK P. PENTECOST, M.D.
BALTIMORE, MARYLAND

From The Department of Gynecology and Obstetrics, The Johns Hopkins University and Hospital

A SEARCH OF MEDICAL LITERATURE REVEALS NO COMPARABLE OBJECTIVE EVALUATION OF THE SUBJECT.

The authors state at the outset,

"Each physician has his own idea of the value or harm of the vaginal douche and many have expressed such ideas in writing. Such opinions have been arrived at without any intensive investigation or observation of subjects using douches as compared to those not using them. The purpose of this study is to report our observations on three groups of patients, one taking no douches, a second douching with a medicated solution* and a third douching with plain water."[1]

1. West. J. Surg., Obsts. & Gynec.: *71*:122-127, 1963

*The medicinal powder used in this study was META CINE®, a scientifically formulated preparation containing: papain, lactose, citric acid, methyl salicylate, eucalyptol, menthol and chlorothymol.

OBSERVATIONS BASED ON EXTENSIVE AND THOROUGH EXAMINATION SCHEDULE.

"One hundred patients were selected at random, regardless of their chief complaint, from the general population attending the Out-Patient Gynecology Clinic of The Johns Hopkins Hospital. Those selected were reexamined at 1, 3, 6, 9 and 12 months after the initial visit."

"At intervals patients were switched to the regimen of another group so that comparison of the effect of douching or not douching might be made in the same individual."

Three years were required to complete the study.

An evaluation of the objective findings of the study demonstrates that douching with META CINE® had the following effects on vaginal secretion:

- increased Doderlein organisms,
- proved effective in lowering WBC counts,
- proved effective in increasing glycogen content.

META CINE® was found to be a good antagonist to vaginal discharge and irritation—and also proved effective in reducing cervicitis.

No untoward effects of douching were encountered in the study.

Reprints of the complete study and professional samples of Meta Cine are available on request.

BRAYTEN PHARMACEUTICAL COMPANY • *Chattanooga 9, Tennessee*

"feels wonderful...cleared head entirely"*

(clearly decongested with Dimetapp)



Dimetapp® Extentabs®

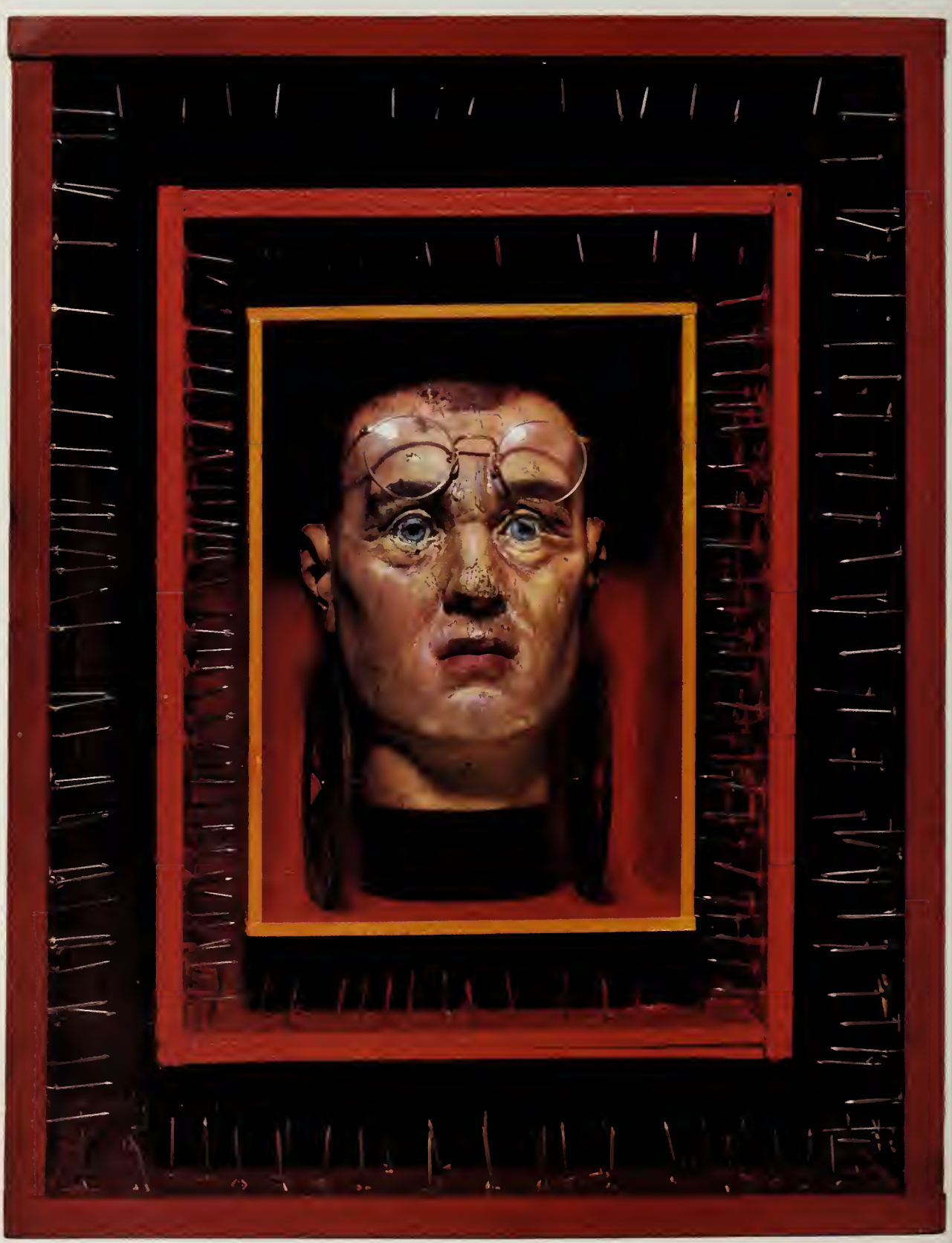
(Dimetane®[brompheniramine maleate], 12 mg.; Phenylephrine hydrochloride 15 mg.; Phenylpropanolamine hydrochloride, 15 mg.)

In sinusitis, colds, U.R.I., Dimetapp lets your "stuffed-up" patients *breathe easy again.* Each long-acting Extentab provides clear relief for up to 10-12 hours, yet seldom causes drowsiness or overstimulation.

BRIEF SUMMARY: ***Indications:*** Dimetapp reduces nasal secretions, congestion, and postnasal drip for symptomatic relief of colds, U.R.I., sinusitis, and rhinitis. ***Side Effects:*** In high dosages, occasional drowsiness due to the antihistamine or CNS stimulation due to the sympathomimetics may be observed. ***Precautions:*** Administer with caution in the presence of cardiac or peripheral vascular diseases and hypertension. ***Contraindications:*** Antihistamine sensitivity. Not recommended for use during pregnancy.

*Clinical report on file, Medical Department, A.H. Robins Co., Inc.

A.H. ROBINS CO., INC., RICHMOND 20, VA.



THE ULCER LIFE

In this "pop art" assemblage, artist Bob Sullivan depicts "the ulcer life" as man-in-a-box. The wall of nails closing in might well symbolize the torturous demands of a rigid, conformist society. As for the man, his disembodied psyche moves relentlessly onward with the blank, fixed stare of a man who has lost control of his own destiny. Small wonder that his gastric mechanism rebels.

NUMBER 1 IN A SERIES

for the ulcer life:
a new strength of glycopyrrolate

ROBINUL® FORTE
2 mg. per tablet

ROBINUL®-PH FORTE
glycopyrrolate 2 mg. phenobarbital 16.2 mg. (warning: may be habit forming)

When glycopyrrolate was first introduced, clinicians were immediately impressed by the remarkable ability of this compound to exert a more specific pharmacologic action on the gastrointestinal tract than on other organ systems. For example, they often found that in difficult patients the dosage could easily be adjusted upwards to achieve the desired suppression of both hypertonicity and secretion . . . without paying the penalty of side effects intolerable to the patient. Thus, it is no surprise that many clinicians suggested that a double-strength 2 mg. tablet of glycopyrrolate would be both practical and useful. For those patients ordinarily unresponsive to anticholinergics or for those exhibiting the more prominent symptoms, the new Forte dosage forms are a worthwhile addition to your ulcer armamentarium.

BRIEF SUMMARY

INDICATIONS: In addition to its primary indications for duodenal and gastric ulcer, glycopyrrolate is indicated for other G-I conditions which may benefit from anticholinergic therapy. Robinul-PH Forte (glycopyrrolate 2 mg. with phenobarbital) is indicated when these situations are complicated by mild anxiety and tension.

CONTRAINDICATIONS: Glaucoma, urinary bladder neck obstruction, pyloric obstruction, stenosis with significant gastric retention, prostatic hypertrophy, duodenal obstruction, cardiospasm (megaesophagus), and achalasia of the esophagus, and in the case of Robinul-PH Forte, sensitivity to phenobarbital.

PRECAUTIONS: Administer with caution in the presence of incipient glaucoma.

SIDE EFFECTS: Dryness of mouth, blurred vision, urinary difficulties, and constipation are rarely troublesome and may generally be controlled by reduction of dosage. Other side effects associated with the use of anticholinergic drugs include tachycardia, palpitation, dilatation of the pupil, increased ocular tension, weakness, nausea, vomiting, headache, dizziness, drowsiness, and rash.

DOSAGE: Should be adjusted according to individual patient response. Average and maximum recommended dose is 1 tablet three times a day: in the a.m., early p.m., and at bedtime.

See product literature for full prescribing information.

A. H. ROBINS COMPANY, INC., RICHMOND, VIRGINIA | PHARMACEUTICALS | RESEARCH Robins

"If food makes him feel good, it is not at all surprising that he will turn to it when times are tough, and his tension mounts."[1]



ESKATROL® Trademark

Each capsule contains Dexedrine® (brand of dextroamphetamine sulfate), 15 mg., and Compazine® (brand of prochlorperazine), 7.5 mg., as the maleate.

SPANSULE®

brand of sustained release capsules

controls appetite all day long with a single morning dose

relieves the emotional stress that causes overeating

Brief Summary of Principal Side Effects, Cautions and Contraindications

Side effects (chiefly nervousness and insomnia) are infrequent, and usually mild and transitory.

Cautions: 'Eskatrol' *Spansule* capsules should be used with caution in the presence of severe hypertension, advanced cardiovascular disease, or extreme excitability. There is a possibility, though little likelihood, of blood or liver toxicity or neuromuscular reactions (extrapyramidal symptoms) from the phenothiazine component in 'Eskatrol' *Spansule* capsules.

Contraindications: Hyperexcitability, hyperthyroidism.

Before prescribing, see SK&F Product Prescribing Information.

Supplied: Bottles of 50 capsules.

1. Dorfman, W., and Johnson, D.: *Overweight Is Curable*, New York, The Macmillan Company, 1948, p. 16.

Smith Kline & French Laboratories SK&F



Of 507 patients with confirmed ear, nose and throat infections... 465 or 91.7% were treated successfully with Signemycin®

Note:
Adams,* whose 50 patients included 20 with ENT infections, stated that Signemycin "was particularly valuable in infections that did not respond to other antimicrobial agents, and in patients to whom penicillin could not be given." All his cases responded within five days; in most patients, all signs of infection disappeared in three days.

*Adams, J.: J. Tenn. Med. Ass. 50:446, Nov., 1957.

Condition	No. of Patients	No. Cured with Signemycin
Otitis media	90	86
Pharyngitis and laryngitis	162	148
Sinusitis	68	55
Tonsillitis and peritonsillitis	163	153
Various	24	23
Totals	507	465 (91.7%)

consistently effective...often when others fail

Signemycin®

tetracycline HCl, 167 mg.; oleandomycin as triacetyloleandomycin, 83 mg. capsules (250 mg.)

Also available as Syrup, Pediatric Drops, and half-strength Capsules

Brief Summary and Bibliography follow.

Science for the world's well-being® Pfizer *Since 1849*

PFIZER LABORATORIES Division, Chas. Pfizer & Co., Inc. New York, New York 10017







TAKE 5

...and find that a TB screening test has never been quite so easy

SWAB THE ARM— UNCAP A TINE TEST— PRESS—DISCARD THAT'S ALL THERE IS TO IT.

Comparable to the Mantoux in accuracy and sensitivity, the TUBERCULIN, TINE TEST is now available in plastic-capped units uniquely suited to general practice needs. They are so simple to use that you can test every patient with ease. Since it requires no refrigeration, the new package of five Tine Test units can stand on any convenient table in your examining rooms, ready for routine use. Side effects are possible but very rare: vesiculation, ulceration or necrosis at test site. Contraindications, none; but use with caution in active tuberculosis.

available as the new individually-capped unit, boxes of 5, or in cartons of 25

TUBERCULIN, TINE TEST
(Rosenthal) Lederle

LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, N.Y.
7899-4

Lederle



Of 1,088 patients with confirmed skin and soft-tissue infections... 1,036 or 95.2% were treated successfully with Signemycin®

Note:
Morador et al.* obtained *excellent results in the treatment of 185 out of 191 soft-tissue infections*, all due to staphylococci. They state: "In the most serious infections occurring in patients with impaired resistance (mainly diabetics) we have had very good results in the control of the infectious condition." In these studies, incision and drainage were employed where indicated.

*Morador, J. L. et al.: Antibiot. Ann. 1959-1960:716.

Condition	No. of Patients	No. Cured with Signemycin
Abscesses, various	35	34
Abscess, gluteal or perianal	54	52
Burns, infected	331	307
Carbuncles and furuncles	125	122
Cellulitis	104	102
Lacerations and wounds, infected	142	128
Ulcers, infected	107	106
Various superficial infections	190	185
Totals	1,088	1,036 (95.2%)

consistently effective...often when others fail

Signemycin®

tetracycline HCl, 167 mg.; oleandomycin as triacetyloleandomycin, 83 mg. capsules (250 mg.)

Also available as Syrup, Pediatric Drops, and half-strength Capsules

Brief Summary and Bibliography follow.

Science for the world's well-being® Pfizer *Since 1849*

PFIZER LABORATORIES Division, Chas. Pfizer & Co., Inc. New York, New York 10017

Signemycin® Bibliography

1. Adams, J.: J. Tenn. Med. Ass. 50:446, Nov., 1957. **2.** Arachi, N. and Gheradi, F.: Quad. Urol. 9:156, Apr.-June, 1959. **3.** Arneil, G. C.: Antibiot. Ann. 1958-1959:327. **4.** Arrigoni, G. et al.: Minerva Med. 48:2701, Aug. 25, 1957. **5.** Baur, A.: Aerztl. Prax. 11:1845, Dec. 5, 1959. **6.** Bellomio, S. et al.: Riv. Ital. Tracoma, vol. 10, Nos. 1-2, Jan.-June, 1958. **7.** Bellomio, S. et al.: Riv. Ital. Tracoma, vol. 11, No. 1, Jan.-Mar., 1959. **8.** Belonoschkin, B. and Lindgren, M.: Svensk. Lakartidn. 56:2134, July 31, 1959. **9.** Bergdahl, U.: Svensk. Lakartidn. 55:1715, June 6, 1958. **10.** Bhattacharyya, M. N. and Bhuyan, J. N.: Antiseptic 56:611, Aug., 1959. **11.** Blass, R.: Schweiz. Med. Wschr. 89:158, Feb. 7, 1959. **12.** Bolognesi, C.: Minerva Med. 48:2695, Aug. 25, 1957. **13.** Candela, R. B.: Med. Esp. 46:273, Oct., 1961. **14.** Cappelli, E.: Minerva Med. 48:2690, Aug. 25, 1957. **15.** Carter, C. H. and Maley, M. C.: Antibiot. Ann. 1956-1957:51. **16.** Caruselli, M. and Musca, A.: Minerva Med. 51:3516, Oct. 17, 1960. **17.** Ceitlin, J.: Med. Panamer. 15:72, Aug. 1, 1960. **18.** Chattas, A. et al.: Antibiot. Med. 7:300, May, 1960. **19.** Chiarenza, A.: Minerva Med. 48:2692, Aug. 25, 1957. **20.** Cooper, J. et al.: Antibiot. Med. 5:302, May, 1958. **21.** Cupples, J. F. B. and Perry, A. W.: Canad. Med. Ass. J. 77:699, Oct. 1, 1957. **22.** David, N. A. and Carter, P. B.: Rocky Mountain Med. J. 58:27, Mar., 1961. **23.** Davis, W. G.: Clin. Rev. 1:21, Apr., 1958. **24.** de Lellis, J.: Dia Med., Apr. 24, 1958, p. 824. **25.** Dienz, H.: Aerztl. Prax. 13:1797, 1961. **26.** Dietel, V. and Meissner, F.: Deutsch. Gesundh. 16:2470, Dec. 28, 1961. **27.** Dryjski, J.: Pol. Tyg. Lek. 24:1113, June 24, 1959. **28.** Durrieu, C. A. et al.: Antibiot. Ann. 1958-1959:297. **29.** Faz Tabio, H.: Rev. Cuba. Pediat. 30:219, Apr., 1958. **30.** Febles Alonzo, D. and Batthyany, C.: Actas Ginecotocol. (Uruguay) 13:4, Aug., 1959. **31.** Febles Alonzo, D. and Biderman, I.: Antibiot. Ann. 1958-1959:270. **32.** Fiora, F. and Compa, F.: Dia Med., Apr. 3, 1958, p. 570. **33.** Garre, E.: Antibiot. Med. 7:285, May, 1960. **34.** Geiger, K.: Praxis 15:365, Apr. 9, 1959. **35.** Gemma, G. B. et al.: Minerva Med. 48:2643, Aug. 25, 1957. **36.** Gerner, G.: Arzneimittelforschung 9:484, Aug., 1959. **37.** Grazia, G.: Clin. Pediat. (Bologna) 41:1005, Nov., 1959. **38.** Greco, O.: Med. Condotto-Med. Prat. 9:497, 1958. **39.** Hammerl, H.: Wien. Med. Wschr. 108:629, July 26, 1958. **40.** Henne, H. F.: Med. Klin., No. 29, July 18, 1958, p. 1267. **41.** Heredia Diaz, J. et al.: Medicina (Mex.) 38:308, July 10, 1958. **42.** Herrera, W. A.: Dia Med. 30:3116, Dec. 8, 1958. **43.** Hoffmann, H.: Medizinische (Stuttgart) 45:1830, Nov. 8, 1958. **44.** Kelleher, D.: Practitioner 182:227, Feb., 1959. **45.** Kleine, W. and Hagen, H.: Ther. Gegenw. 98:171, Apr., 1959. **46.** Klovstad, O.: T. Norsk. Laegeforen. 77:681, Aug. 15, 1957. **47.** Kobari, K. and Tajiri, I.: Naika No Ryoiki (Field of Internal Medicine) 7:245, May, 1959. **48.** Kohler, H. F.: Clin. Rev. 1:16, Apr., 1958. **49.** Kraljevic, R. et al.: Antibiot. Med. 5:364, June, 1958. **50.** La Caille, R. A. and Prigot, A.: Antibiot. Ann. 1956-1957:67. **51.** Lapeyre, L. et al.: Marseille Med. 99:953, 1962. **52.** Levi, W. M., Jr. and Kredel, F. E.: J. S. Carolina Med. Ass. 53:178, May, 1957. **53.** Loughlin, E. H. et al.: Antibiot. Ann. 1958-1959:293. **54.** Loughlin, E. H. et al.: Antibiot. Med. 7:739, Dec., 1960. **55.** Mathur, S. N. and Joshi, V. S.: J. Indian Med. Ass. 34:437, June 1, 1960. **56.** Moggian, G.: Minerva Med. 48:2648, Aug. 25, 1957. **57.** Molinelli, E. A. et al.: Antibiot. Ann. 1957-1958:692. **58.** Montilli, G. and Avellino, M.: Dermatologica (Basel) 9:2, 1958. **59.** Morador, J. L. et al.: Antibiot. Ann. 1959-1960:716. **60.** Morador, J. L. and Saldana Tate, L.: An. Ateneo, Clin. Quirur. 1:52, Jan., 1958. **61.** Morel, A. S.: Clin. Rev. 1:18, July, 1958. **62.** Morey, G. S. et al.: Rev. Hosp. Nino (Lima) 18:293, 1957. **63.** Ottolenghi, C. E. et al.: Bol. Soc. Cir. B. Air. 41:739, Nov. 6, 1957. **64.** Pagola, J. G. et al.: Antibiot. Ann. 1958-1959:287. **65.** Pavone, M. et al.: Minerva Urol. 70:121, Sept.-Oct., 1958. **66.** Porrazzo, F.: Gazz. Med. Ital. 118:550, Dec., 1959. **67.** Prats, F. and de la Parra, M. A.: Antibiot. Ann. 1959-1960:484. **68.** Prokop, O.: Prakt. Arzt. 12:145, Feb. 15, 1958. **69.** Ramirez Boettner, C. M. et al.: Rev. Med. Paraguay 5:269, July-Sept., 1960. **70.** Randig, K.: Deutsch. Med. J. 8:447, Aug. 15, 1957. **71.** Saavedra Amaro, S. and Lopez Zepeda, L.: Medicina (Mex.) 38:396, Aug. 25, 1958. **72.** Saldana Sotomayor, F.: Medicina (Mex.) 39:191, May 10, 1959. **73.** Santos, A.: Rev. Brasil. Med. 16:463, July, 1959. **74.** Schenone, H.: Antibiot. Ann. 1958-1959:316. **75.** Schunk, A.: Int. Rec. Med. 173:143, Mar., 1960. **76.** Sgarzini, L. and Amato, R.: Ann. Stomat. 7:499, July, 1958. **77.** Shubin, H.: Antibiot. Med. 4:174, Mar., 1957. **78.** Sundberg, R. H.: Antibiot. Med. 7:115, Feb., 1960. **79.** Talbot, J. R.: Wisconsin Med. J. 57:237, June, 1958. **80.** Tato, J. M. et al.: Antibiot. Ann. 1957-1958:675. **81.** Weithofer, W.: Medizinische (Stuttgart) No. 33-34:1490, Aug. 22, 1959. **82.** Willcox, R. R. and Rosedale, N.: Brit. J. Vener. Dis. 38:19, Mar., 1962. **83.** Willemot, J. P. et al.: Bruxelles Med. 38:1026, June 22, 1958. **84.** Winton, S. S. and Chesrow, E. J.: Antibiot. Ann. 1956-1957:55. **85.** Wolman, B.: Practitioner 185:199, Aug., 1960. **86.** Yodh, B. B.: J. J. J. Group Hosp. 5:183, July, 1960. **87.** Zaldivar, C. G. and Falcone, F. L.: Rev. Hosp. Nino (Lima) 20:141, June, 1958.

SIGNEMYCIN®

Side Effects: Glossitis and allergic reactions, as well as severe anaphylactoid reactions, have been reported as rare side effects. Should significant reaction or idiosyncrasy occur, discontinue medication and institute countermeasures. Use of tetracycline during the last trimester of pregnancy, neonatal period and early childhood may cause discoloration of developing teeth. Reduce usual oral dosage and consider serum level determinations in patients with impaired renal function to prevent possible liver toxicity due to excessive accumulation of antibiotic in the serum.

Precautions: Overgrowth of nonsusceptible organisms may occur. In such cases, discontinue medication and institute appropriate specific therapy as indicated by susceptibility testing. Aluminum hydroxide gel given with antibiotics has been shown to decrease their absorption and is contraindicated. The coloring agents used in Signemycin Syrup and Pediatric Drops may produce red discoloration of stools.

Triacetyloleandomycin, a constituent of Signemycin, administered to adults in daily oral doses of 1.0 Gm. (3 Gm. Signemycin) for periods of more than ten days may produce hepatic dysfunction and jaundice. In the rare patient who requires this high dosage level of Signemycin initially, liver function should be carefully followed and dosage should be reduced, as promptly as possible, to the usual recommended range of 1.0 to 2.0 Gm. per day. Therefore, Signemycin is recommended primarily for the treatment of acute or severe infections, with treatment restricted to a ten-day period. If clinical judgment dictates continuation of therapy beyond ten days, serial monitoring of the liver profile should be carried out, including BSP, transaminase, and cephalin flocculation tests. Changes observed in liver function were reversible following discontinuation of the drug.

Formulas: Capsules: 250 mg. Signemycin (167 mg. tetracycline HCl and 83 mg. oleandomycin as triacetyloleandomycin).

Capsules: 125 mg. Signemycin (83 mg. tetracycline HCl and 42 mg. oleandomycin as triacetyloleandomycin).

Syrup: 125 mg. Signemycin (tetracycline equivalent to 83 mg. tetracycline HCl and 42 mg. oleandomycin as triacetyloleandomycin) per 5 cc.

Pediatric Drops: 100 mg. Signemycin (tetracycline equivalent to 67 mg. tetracycline HCl and 33 mg. oleandomycin as triacetyloleandomycin) per cc.

More detailed professional information available on request.

Science for the world's well-being® Pfizer *Since 1849*

PFIZER LABORATORIES Division, Chas. Pfizer & Co., Inc. New York, New York 10017



Of 5,057 patients with confirmed infections of all body systems... 4,731 or 93.5% were treated successfully with Signemycin®

Note:

The high rate of response to Signemycin in these cases is noteworthy because the totals include many patients with difficult-to-treat infections, many whose infections had proved resistant to other agents, and many who had been treatment failures on other therapy.[1-87] In addition the following criteria were used for the cases cited: (1) only published results were used (2) results were confirmed by clinical and/or laboratory findings (3) patients were cured, not "improved" (4) dosage conformed with current recommendations in the United States (5) no other anti-infective agents were used concomitantly (6) no instance of prophylactic use was included in these tabulations.

Condition	No. of Patients	No. Cured with Signemycin
Ear, nose and throat infections	507	465
Respiratory infections	1,028	954
Gastrointestinal infections	425	387
Genitourinary infections	748	684
Skin and soft-tissue infections	1,088	1,036
Bone and joint infections	71	64
Deep-seated or generalized infections	257	251
Obstetrical & gynecological infections	341	320
Miscellaneous conditions	592	570
Totals	5,057	4,731 (93.5%)

consistently effective...often when others fail

Signemycin®

tetracycline HCl, 167 mg.; oleandomycin as triacetyloleandomycin, 83 mg. capsules (250 mg.)

Also available as Syrup, Pediatric Drops, and half-strength Capsules

Science for the world's well-being® Pfizer *Since 1849*

PFIZER LABORATORIES Division, Chas. Pfizer & Co., Inc. New York, New York 10017



Outwardly calm...but what goes on inside?

Appearances on the outside do not necessarily suggest what goes on inside. This is particularly true of the ulcer patient, who may appear jolly and unruffled to his neighbors, but presents to you the classic symptoms: organic and functional disorders of the G.I. tract, associated with anxiety and tension.

Consider, when you see him next, the value of PATHILON® SEQUELS® with Phenobarbital, which provides sustained anticholinergic protection from spasm and pain in the target areas, as well as sustained phenobarbital action against triggering anxiety. The controlled release of the active ingredients in the SEQUELS® formulation means protective medication day and night.

Effective in peptic ulcer, intestinal colic, ileitis, esophageal spasm, spastic colon, alcohol-induced G.I. upsets, gastric hypermotility and anxiety neurosis with G.I. symptoms. Should be used as adjunct to other measures.

Side Effects (due to tridihexethyl chloride): dry mouth, blurring of vision, constipation.

Contraindications: urinary bladder neck obstruction; glaucoma; obstructive congenital anomalies of the gastrointestinal tract; pyloric obstruction; congenital megacolon; and stenosing gastric or duodenal ulcer with significant gastric retention.

Also available, without phenobarbital, as PATHILON® Tridihexethyl chloride SEQUELS® 75 mg.

Pathilon® Sequels® with Phenobarbital Sustained Release Capsules

Each capsule contains: Tridihexethyl chloride, 75 mg., and phenobarbital, 45 mg.

LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, New York

Lederle

279-4

for you and your patients...

greater bacteriostatic protection than with any other leading antibacterial bar soap... new Safeguard



New Safeguard provides the regular user with greater sustained reduction of skin bacteria than any other leading antibacterial bar soap. This heightened effectiveness is achieved through a more potent, yet excellently tolerated combination of antibacterial agents.* Exhaustive laboratory and clinical tests have proved Safeguard's...

- **superior residual bacteriostatic effect**
- **superior control of S. aureus**
- **unsurpassed safety and mildness**

*Safeguard contains 3,5-di- and 3,4',5-tribromosalicylanilides, 4,4'-dichloro-3- (trifluoromethyl) carbanilide, and 3,4,4'-trichlorocarbanilide.

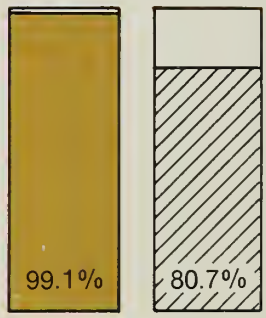
here are the facts on Safeguard's superior antibacterial effectiveness

The superior antibacterial action of Safeguard has been demonstrated by a variety of techniques. Below are some of the comparative results obtained with Safeguard ▬ and another leading deodorant and antibacterial bar soap containing 0.5% hexachlorophene and 0.5% 3,4,4′-trichlorocarbanilide. ▨

superior residual antibacterial effect proved by handwashing tests

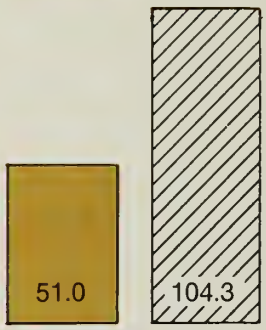
In a modified Price multiple washbasin procedure, Safeguard attained an average reduction of 99.1% in the number of organisms recoverable from the final rinse water, as compared to an average of 80.7% for the other antibacterial bar soap tested. Both products had been used exclusively for four days prior to evaluation.

Safeguard has also proved its superior residual bacteriostasis in field tests conducted under everyday household conditions as measured by a simplified washbasin technique.



superior residual antibacterial effect confirmed by skin stripping technique

Safeguard and the other antibacterial bar soap were used for normal everyday toilet purposes by a group of housewives for 14 days. Layers of superficial skin cells were then taken by a stripping technique to determine the density of the bacterial population. The average count per 2.25 sq. cm. for Safeguard was 51.0 while the finding for the other antibacterial bar was 104.3—more than double Safeguard's reading.



superior control of S. aureus demonstrated in laboratory and field tests

In vitro serial dilution tests with **S. aureus** showed Safeguard to inhibit growth at a minimal concentration of 3 p.p.m. while the other antibacterial bar soap required 4 p.p.m. to produce this effect. Interestingly enough, a leading surgical scrub liquid detergent containing 3% hexachlorophene was inhibitory at 7 p.p.m. in this instance. With two antibiotic resistant strains of **S. aureus,** Safeguard maintained its level of effectiveness. **In vivo** studies have also demonstrated Safeguard's superiority in reducing the number of persons carrying this potential pathogen.

testing has provided extensive evidence of Safeguard's mildness and safety

Repeat patch testing and careful professional observation of the skin of regular users has shown that Safeguard is as mild as any other quality toilet soap—as suitable for the nursery as for the operating room. Exhaustive tests have also documented the safety of its antibacterial components.

SAFEGUARD'S IMPORTANCE TO YOU.. Safeguard's superior antibacterial effect makes it of particular value to physicians and nurses because of their greater than average exposure to pathogenic organisms.

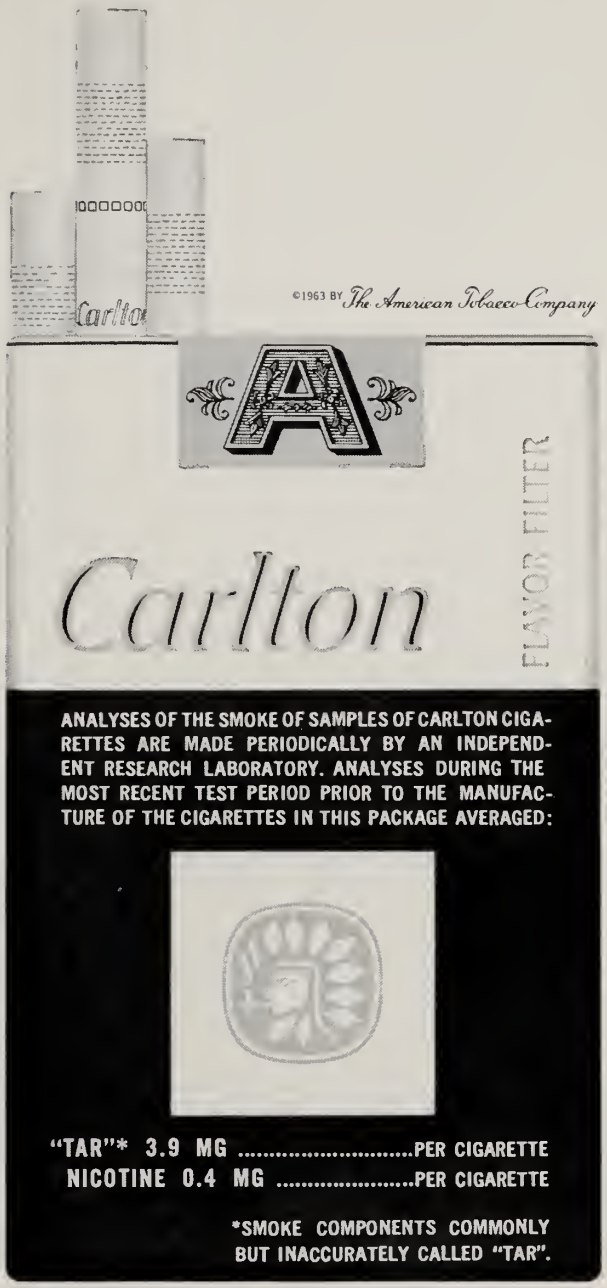
For further information please write to: Director of Medical Programs, P.O. Box 599. PROCTER & GAMBLE, CINCINNATI, OHIO 45201



002R64

Air vents in the filter.

Carlton—the first cigarette to combine distinctive blend, high porosity paper, and a new flavor-enriching filter with activated charcoal and precision air vents.



Test results on the pack.

On every pack, on every carton of Carlton are printed latest "tar" and nicotine test results as determined in periodic analyses by an independent research laboratory.

Carlton. Low in "tar" and nicotine, high in smoking pleasure. The lightest smoke of all. A cigarette in the tradition of...

THE AMERICAN TOBACCO COMPANY—FIRST IN CIGARETTE RESEARCH.

Product of The American Tobacco Company © A. T. Co.





Your patient doesn't have to be in the Masters to get sprains and strains

Regardless of the etiology of muscle sprain or strain, 'SOMA' COMPOUND helps relieve pain and relax muscle. Patient comfort can be increased and recovery time shortened.

Soma® Compound

carisoprodol 200 mg., acetophenetidin 160 mg., caffeine 32 mg.

rational combination therapy for sprains and strains: relaxes muscle, relieves pain. Also available with ¼ gr. codeine as 'SOMA' COMPOUND with CODEINE: carisoprodol 200 mg., acetophenetidin 160 mg., caffeine 32 mg., codeine phosphate 16 mg. (Warning: may be habit-forming.)

BRIEF SUMMARY
'SOMA' COMPOUND; 'SOMA' COMPOUND plus CODEINE: carisoprodol, acetophenetidin, caffeine, codeine phosphate. *Warning: Codeine may be habit-forming.* **Indications:** 'Soma' Compound and 'Soma' Compound with Codeine are indicated for relief of pain and stiffness in traumatic, rheumatic and other similar conditions. **Contraindications:** Allergic or idiosyncratic reactions to carisoprodol or codeine. **Precautions:** *Acetophenetidin*—May damage the kidneys when used in large amounts or for long periods. *Codeine*—Should be used with caution in addiction-prone individuals. *Carisoprodol*—Like other central nervous system depressants, should be used with caution in patients with known propensity for taking excessive quantities of drugs and in patients with known sensitivity to compounds of similar chemical structure, e.g., meprobamate. **Side effects:** *Codeine*—Nausea, vomiting, constipation, and miosis. *Carisoprodol*—The only side effect reported with any frequency is drowsiness, usually on higher than recommended doses. One instance each of pancytopenia and leukopenia occurring when carisoprodol was administered with other drugs has been reported as has an instance of fixed drug eruption with carisoprodol and subsequent cross-reaction to meprobamate. Rare allergic reactions, usually mild, have included one case each of anaphylactoid reaction with mild shock and angioneurotic edema with respiratory difficulty, both reversed with appropriate therapy. Other rarely observed reactions have included dizziness, ataxia, agitation, increase in eosinophil count, and gastrointestinal symptoms. Massive overdosage may produce coma and/or mild shock and respiratory depression. **Dosage:** 'Soma' Compound and 'Soma' Compound with Codeine, one or two tablets three times daily and at bedtime. **Supplied:** 'Soma' Compound, orange tablets, each containing carisoprodol 200 mg., acetophenetidin 160 mg., and caffeine 32 mg. 'Soma' Compound with Codeine, white, lozenge-shaped tablets, each containing carisoprodol 200 mg., acetophenetidin 160 mg., caffeine 32 mg., and codeine phosphate 16 mg. Narcotic order form required. *Before prescribing, consult package circular.*

CSO-3518

WALLACE LABORATORIES
Cranbury, N. J.

The case of diaper rash



solved by NEW UNDERCOVER AGENT

BAKER'S **CREME**

DIAPER-SIL™



CONTAINS : panthenol, benzalkonium chloride, dimethylpolysiloxane, in a water-miscible cream base.

eliminates ammonia-splitting bacteria. The bactericidal component, benzalkonium chloride, has a proven record of effectiveness. It acts rapidly against a wide range of organisms implicated in diaper rash — including Brevibacterium ammoniagenes and Alcaligenes faecalis.

soothing, healing, protective. DIAPER-SIL also provides panthenol in a special base containing silicone . . . helps to soothe inflamed skin, protect from external irritants and gently promote healing.

TO HELP PREVENT AND TREAT DIAPER RASH, CHAFING AND SIMILAR CONDITIONS

BAKER LABORATORIES, INC. Cleveland, Ohio 44115

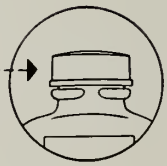
Subsidiary of U.S. Vitamin & Pharmaceutical Corp.

HOW TO WIN FRIENDS...

little



New
Orange Flavored
Bayer Aspirin for Children
is sweet
all the way through,
so children
take it readily.
The GRIP-TIGHT CAP ----------
on the bottle
helps keep them
from taking it
on their own.



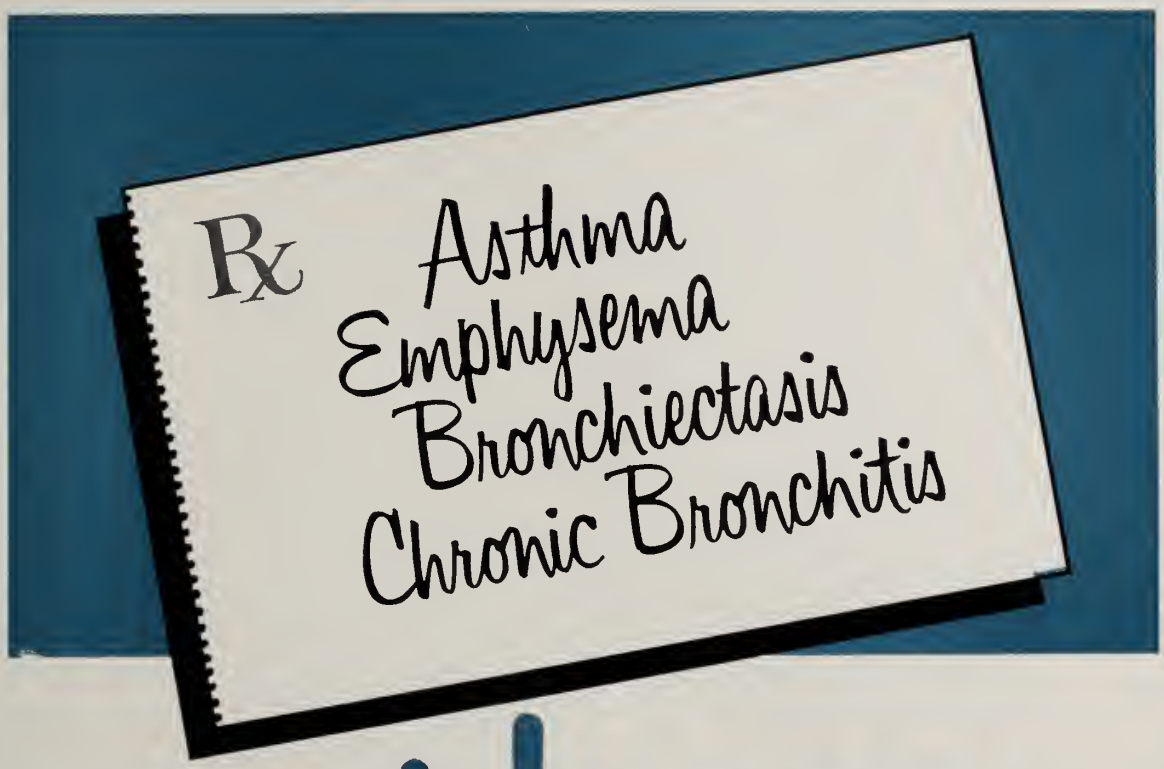
Bottles of 50 tablets
(1¼ grains each)

NOW!
NEW ORANGE FLAVOR!



We will be pleased to send
professional samples on request.

THE BAYER COMPANY
Division of Sterling Drug Inc., Dept. D112
90 Park Avenue, New York, N. Y. 10016



mudrane®

The Bronchodilator with the intermediate dose of KI

The fast-disintegrating, uncoated tablet gives relief to the asthmatic in 15 minutes. The ephedrine-phenobarbital balance eliminates nervousness. It relaxes broncho-constriction, liquefies mucus-plugging and is buffered for tolerance.

Each tablet contains Aminophylline 130 mg., Ephedrine HCl 16 mg., Phenobarbital 22 mg. (Warning: may be habit-forming), Potassium Iodide 195 mg. Dosage: One tablet, 3 or 4 times a day. Precautions: Usual for aminophylline-ephedrine-phenobarbital. Iodides may cause nausea, and very long use may cause goiter. Iodide contraindications: tuberculosis, pregnancy. Issued in 100's, 1000's.

Also available as

mudrane® GG

Formula is identical to Mudrane except that Glyceryl Guaiacolate 100 mg. replaces the Potassium Iodide as the mucolytic expectorant. Issued in 100's and 1000's.

and

mudrane® GG ELIXIR

The formula of four teaspoonfuls Elixir equals one Mudrane GG tablet. Dosage 6 to 12 years: One to two teaspoonfuls 3 or 4 times a day. Under 6 years, adjust dosage according to age. Issued in pints and half gallons.

WILLIAM P. POYTHRESS & COMPANY, INC., RICHMOND, VIRGINIA

Manufacturers of ethical pharmaceuticals since 1856



and it's not a once-over-lightly one, either. All rubber stoppers used in Lilly ampoules are scrupulously cleaned with a detergent and hot deionized water in a special washing machine like the one pictured above. This removes any foreign matter adhering to them. Then the stoppers are autoclaved at 120° to 121°C. for one hour. They are now clean, sterile, and ready for use. In case the stoppers are not used within seventy-two hours, they are returned for resterilization. □ This meticulous process is only one of the many safeguards to insure the quality of the finished product and to protect the ultimate user.

Eli Lilly and Company • Indianapolis 6, Indiana, U.S.A.

Lilly

401196

Journal of the Tennessee Medical Association
OWNED AND PUBLISHED BY THE ASSOCIATION
Volume 57 NOVEMBER, 1964 Number 11

Neoplasms Masquerading As Cerebral Vascular Accidents*

JOHN J. McCUTCHEN, M.D.† and WILLIAM F. McCORMICK, M.D., Memphis, Tenn.

The authors use four cases to illustrate the ease with which tumors of the central nervous system may be misdiagnosed as cerebrovascular accidents.

Introduction

Patients with neurologic deficits attributed to acute cerebral dysfunction are most frequently diagnosed as cerebral vascular accidents or "strokes." This diagnosis is unusually arrived at after only a history and physical examination and no further diagnostic studies are performed.

The brain has a limited capacity to express signs of dysfunction and the management of patients with intracranial lesions cannot be safely based on clinical impressions alone. This seems self-evident, yet the medical management of these patients often is planned this way.

The initial diagnostic impression is a requisite first step in the management of patients suspected of having a cerebral vascular accident but it is not necessarily the correct diagnosis. To determine the nature of the lesion it will often be necessary to call on the appropriate contrast studies. Only when this entire sequence is followed to completion can the fresh extracranial vascular occlusion and the benign intracranial tumor be differentiated from the less treatable lesions, thus making it possible to salvage some patients who would otherwise die or go untreated because of missed diagnosis.

Brain tumors are not commonly thought to produce a "stroke-like" clinical picture. However, the following 4 cases were diagnosed as "strokes" during a six month period on the clinical services of the City of Memphis Hospitals and the correct diagnosis was not made until postmortem examination.

Case 1. This 60 year old negro woman was apparently in good health until 6 weeks before admission to the hospital when she suddenly felt profound weakness and fell to the floor without loss of consciousness or convulsive movements. She was noted to have weakness of the left arm and left leg at this time. Three weeks prior to admission the patient showed fluctuations in higher function, with normal speech and thought processes alternating with "talking out of her head." Her neck was found to be stiff 2 weeks prior to her hospitalization. Urinary incontinence, drowsiness and anorexia became increasingly prominent during the week preceding admission.

Vital signs on admission to the Medical Service were T. of 99°F. (rectal), R. 20, B.P. 150/50, and P. of 80. The patient was described as dehydrated and uncooperative. An old enucleation was noted O. D. There was a regular sinus rhythm with the P. M. I. in the 5th intercostal space in the midclavicular line. A Grade II/IV diastolic murmur was heard in the aortic area, which was transmitted to the back.

Neurologic examination disclosed the patient to be stuporous, with inappropriate responses. There was central weakness of the 7th and 9th cranial nerves on the left. A left spastic hemiparesis was present with ankle clonus and a left Babinski sign. Left hemihypesthesia to pin prick was observed. The ocular fundus was not examined.

Admission laboratory studies were: PCV. 42% and WBC. count of 6750 with 78% band forms. The urine specific gravity was 1.020. The serum electrolytes revealed a bicarbonate of 30, chloride of 93, potassium of 3.6, and sodium of 136 mEq/L. The BUN. was 35 mg.%. Blood test for syphilis

*From the Division of Neurology and the Laboratory of Neuropathology, University of Tennessee and the City of Memphis Hospitals, Memphis, Tenn.

†Dr. McCutchen is NIH Fellow in Neurology, Division of Neurology, University of Tennessee, Memphis.

was positive at 1:32 dilution. Chest and abdominal radiographs were interpreted as normal. Lumbar puncture was done promptly, with an opening pressure of 340 mm. of water, and grossly bloody fluid. Cell count was not done.

The patient was managed by fluids with intravenously and nasogastric tube feedings on the Medical Service. After rehydration the BUN. was 19 mg. and the PCV. 31%. Lumbar puncture repeated on the 2nd hospital day showed an opening pressure of 300 mm. of water, and xanthochromic fluid. Spinal fluid electrophoresis showed an elevated gamma globulin fraction and a total protein of 57 mg.%. Injections of procaine penicillin were started because of the positive blood test; 6 million units were given during the hospitalization. The patient died on the 56th hospital day with little clinical change.

At autopsy, there was a massive right cerebral glioblastoma which had invaded the basilar leptomeninges and had given rise to right uncal and left tonsilar hernias (Fig. 1). This neoplasm had

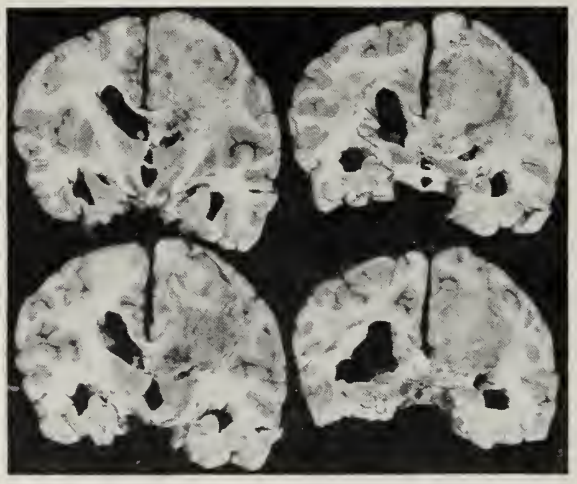


Fig. 1. (Case 1) Coronal sections of the brain revealing the massive right cerebral glioblastoma multiforme. There is massive leptomeningeal invasion, as can be seen best in the interpeduncular fossa in the lower right hand section.

crossed the midline to invade the left cerebral hemisphere. Microscopically, it was a typical glioblastoma multiforme.

Comment. The presenting history of intermittant and fluctuating neurologic deficits pointed without doubt to an intracranial lesion. The onset of stiff neck and progressive loss of consciousness could be related to increased intracranial pressure and herniation of the cerebellar tonsils, and possibly to the massive invasion of leptomeninges by the neoplasm.

Lumbar puncture without prior observation of the ocular fundus, as a method of excluding increased intracranial pressure, is always hazardous in neurologic patients. Lumbar puncture in itself is of relatively little value when dealing with the diagnosis of brain tumor. It must be emphasized that a normal protein in the spinal fluid does not always exclude tumor and, conversely, the presence of an increased protein is not statistically significant of the presence of a brain tumor. Bloody spinal fluid is associated with hemorrhage into tumors as well as with aneurysms and other vascular lesions.

Case 2. This 66 year old Negro was in good health until 1 month prior to admission when he developed weakness of the right arm and leg. He was examined in the emergency room and sent home with the diagnosis of "stroke." Initially there was some improvement, and the patient became able to walk and had no disturbance in higher function. Two weeks before admission progressive right-sided weakness and anorexia became prominent, and the patient was no longer able to walk. One week later he developed complete right-sided paralysis with increasing lethargy. The patient was again seen in the emergency room and then admitted to the hospital.

Physical examination revealed the patient to be emaciated, severely dehydrated, and chronically ill. The vital signs were, T. 99°F., Cheyne-Stokes respirations, pulse 120, and B.P. 140/90. There was a large sacral decubitus ulcer.

On neurologic examination the patient was found to be lethargic and stuporous, with only adversive responses to painful stimulation. He would not speak. There was a right central facial nerve paresis and a right hemiplegia. The pupils were equal and reacted to light. The ocular fundi were not observed. Plantar reflex was absent on the right and there was a flexor response on the left. The deep tendon reflexes were more active on the right.

Admission laboratory examinations were reported as follows: PCV. 48%, WBC. count 14,000 with 91% band forms, a urine specific gravity of 1.024 and pH of 5.0. The blood determinations were chloride 108, bicarbonate 28, potassium 5.4, and sodium more than 165 mEq/L, BUN. of 138 mg., and blood sugar 170 mg.%. The blood V.D.R.L. was nonreactive. No radiographs were taken. Lumbar puncture was promptly performed,—the opening pressure was 55 mm. water, and the fluid which was initially pink cleared in the subsequent tubes. There were 400 RBC. present per cu. mm.; the protein was 250 mg. and the glucose 105 mg.%.

Neurosurgical and neurologic consultants advised that the patient had had a "stroke," and no special diagnostic studies were recommended. Intake and output records are summarized below:

	Intake		*Output*	
	*I.V.**	*Naso-gastric†*	*Urine*	*Vomitus*
Day 1 admission	0	0	0	0
2	2300	0	350	0

3	1600	1030	1200	0
4	600	400	?	400

*D5W
†1500 Calories in 2400 cc. of water

Early on the 4th hospital day the patient's temperature was found to be 102.2°F. Procaine penicillin was started. The nurses noted the patient vomited each time he was disturbed or moved. Moist rales were heard in the lungs, and the patient expired later on in the 4th hospital day.

At autopsy two primary neoplasms were found in the central nervous system. A 7 cm. meningioma of the left sphenoid ridge was distorting the left frontal and temporal lobes (Fig. 2). This



FIG. 2. (Case 2) Illustration of the large left frontotemporal (sphenoid ridge) meningioma *in situ.*

overlay an extensive, focally necrotic glioblastoma (Fig. 3). At gross examination the glioblastoma was mistaken for necrosis in the bed of the meningioma, but subsequent microscopic examinations revealed the true nature of the neoplasm. Thus, the patient had 2 discrete primary neoplasms—a meningioma and a glioblastoma.

Comment. The onset of neurologic deficit one month prior to admission was diagnosed as "stroke" by clinical impression without the benefit of any confirmatory study. The patient had a second opportunity for a more precise diagnosis on the return visit to the hospital with the history of progressvie weakness and diminished higher cortical functions.



FIG. 3. (Case 2) Coronal sections of the brain demonstrating extensively necrotic glioblastoma in the left cerebrum lying in the bed of the meningioma.

Severe dehydration and hemoconcentration with prerenal azotemia probably contributed to the cortical depression. Even without observing the fundi for papilledema, increased intracranial pressure should have been suspected from the clinical signs of cortical depression and vomiting.

This patient, like the one in Case 1, also had unequivocal leptomeningeal invasion by the glioblastoma—a phenomenon we have observed in over 50 per cent of our glioblastomas at postmortem.

Case 3. This 70 year old Negro first complained of brief attacks of dizziness and "wave-like vi-

sions" before his eyes 9 years prior to admission to the hospital. During subsequent visits to the Medical Outpatient Clinic he complained to his physician of dizziness, a bad-taste in his mouth, and loss of appetite. He was not seen for a number of months, only to be admitted to the Emergency Room suffering from bilateral injuries to his legs when he was struck by an automobile. X-ray examination of the lower legs revealed no fractures. Two days after the injury the patient came to the Fracture Clinic, and his left leg was described as being cold and swollen. Both knees were markedly tender and swollen. Radiographs revealed fracture dislocations of both knees, and the patient was admitted to the Orthopedic Service.

The admission history is limited to a brief description of the recent injury and the following statements: "Patient denies major medical and surgical illness in the past. Denies drug allergies." The brief physical examination noted the following, P. 94 and B.P. 180/90. There was no description of the pupils, ocular fundi, nor a neurologic examination.

Admission laboratory data revealed a PCV. of 36%, a WBC. count of 8,850 with 63% band forms, and a urinalysis with 30-60 WBC. per hpf.

The patient was taken to the operating room for exploration of the popliteal artery. Spinal anesthetic was administered at 3:00 p.m.; and at 3:30 p.m. there was a fall in the blood pressure, which was treated by transfusion with 2 units of whole blood. The B.P. returned to 160/80. The artery could not be successfully opened, and an above-the-knee amputation was performed. At 6:15 p.m., while still on the operating table, there was a cardiac arrest. Thoracotomy and open heart massage was unsuccessful.

At autopsy a 4.5 cm., roughly spherical meningioma in the olfactory groove was found (Fig. 4). A prominent tonsilar hernia of the left cerebellum and a necrotic, markedly atrophic right tonsil were present. There was almost total destruction of the olfactory tracts bilaterally. Microscopic examination confirmed the meningioma, and revealed encephalomalacia of the atrophic right cerebellar tonsil consistent with infarction of a chronically herniated tonsil.

Comment. This patient's complaints 9 years before his terminal hospital admission were never resolved, and no neurologic diagnosis was entertained. The injury of his lower extremities which precipitated the hospital admission might have led to the diagnosis of an intracranial lesion if only a careful history and physical examination had been done before the patient was allowed to undergo operation.

Lumbar puncture in the absence of an adequate history and physical examination, and in particular, careful attention to the ocular fundi is a hazardous procedure in a patient with an occult tumor.

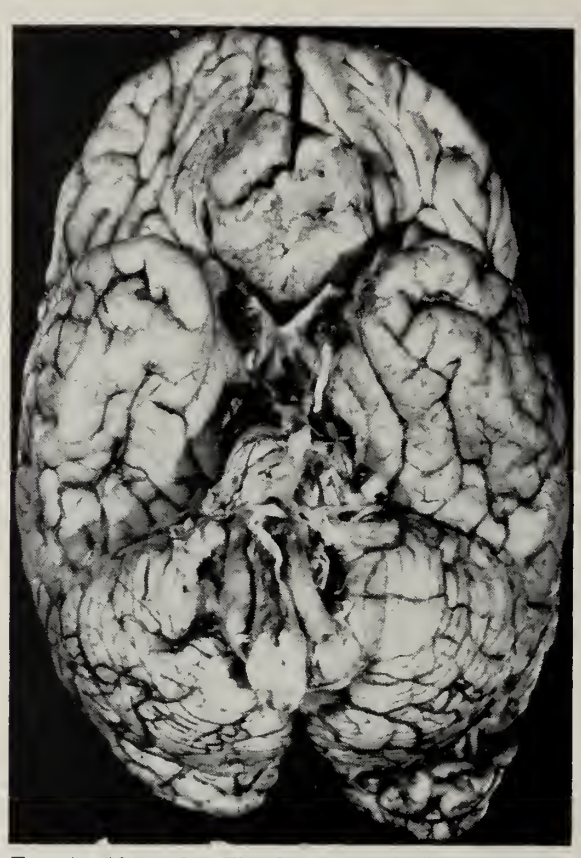


FIG. 4. (Case 3) The large meningioma is seen in the olfactory groove. The herniated left cerebellar tonsil is clearly seen, as well as the infarcted and atrophic right tonsil.

The distortion of the brain stem with increased intracranial pressure and chronic cerebellar herniation was evidently tolerated by this patient until his hospital admission. Two factors probably contributed to bring about his respiratory arrest and subsequent death. The balance between cerebrospinal fluid pressures above and below the level of the foramen magnum may well have been disturbed by lumbar puncture and subsequent loss of cerebrospinal fluid. This would encourage the further downward displacement of the cerebellum into the foramen magnum and consequent medullary compression. In addition, one of the important compensating mechanisms for an increased intracranial pressure is an increase in systemic blood pressure. The episode of hypotension could result in significant showing or cessation of cerebral blood flow. This cessation of blood flow would be due to capillary collapse from the cerebrospinal fluid pressure exceeding the capillary pressure. Under these circum-

stances it is possible for portions of the brain actually to cease to function. The first sign of this type of cerebral ischemia is usually respiratory arrest. With artificial respiration it is possible to maintain vegetative functions in other organs of the body with a brain which is essentially dead.

Case 4. This 60 year old negro woman came to the Emergency Room complaining of dizziness, heart flutter, and chest pain which had their onset on the morning of admission. She gave the additional history of the gradual onset during the past month of left hemiparesis, inappropriate use of words and deterioration of sentence structure. She had been given digitalis and "high blood pressure medication" by her family physician during the month prior to admission.

Physical examination disclosed a P. of 142, T. 99.2°F., R. 20, and B.P. of 120/95. The heart rhythm was regular, and the P.M.I. was in the 6th interspace at the midclavicular line. No cardiac murmur was heard.

Neurologic examination found the patient confused, disoriented and belligerent. Her pupils were equal and reactive to light. The optic discs were not described. A flaccid left hemiparesis was present, and a Babinski sign was observed on the left. She was admitted to the Medical Service.

Laboratory examination on admission revealed a PCV. of 45%, a WBC. count of 8950 with 74% band forms, urine specific gravity of 1.035 with a pH of 6.0, a BUN. of 27 mg., and a blood glucose of 125 mg.%. The serum electrolytes were, bicarbonate, 16, chloride, 102, potassium, 4.5 and sodium 137 mEq/L. Chest x-ray examination was interpreted as normal. An electroencephalogram revealed bitemporal slowing.

The patient was rapidly digitalized and her heart rate began to return towards normal. On the 2nd hospital day the EKG. verified the slower sinus tachycardia, and no other adnormalities were noted. Lumbar puncture showed an opening pressure of 130 mm. of water with 65 RBC. per cu. mm. The Pandy test was negative, and the protein was 69 mg.%. The patient was found to take her diet poorly, and on the 4th hospital day refused to swallow. She developed Cheyne-Stokes respiration and expired at 4:40 P. M.

Autopsy revealed a bronchogenic carcinoma in the left lung with multiple metastases to the central nervous system. Over 100 separate nodules were counted in the brain (Figs. 5 and 6). Some nodules had fresh hemorrhage into them.

Comment. The history of progressive unilateral weakness and deterioration of speech should have alerted the physician to intracranial disease. The persistent tachycardia resulted in a decreased cardiac output and produced the patient's chief complaint on admission.

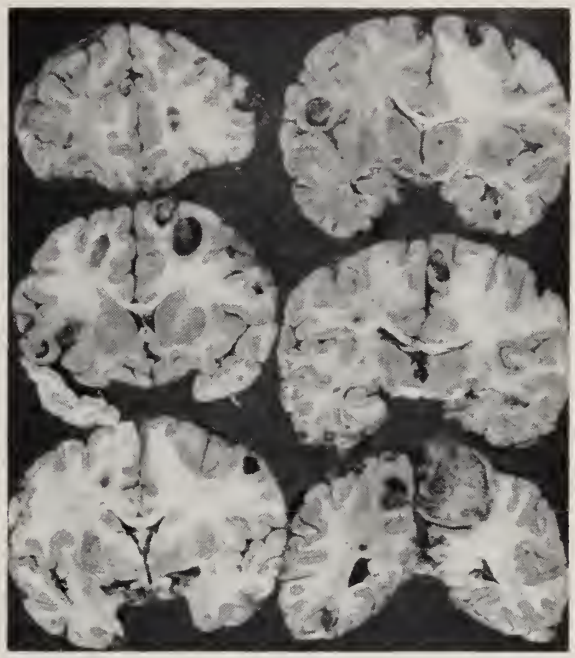


FIG. 5. (Case 4) Coronal sections of the cerebrum demonstrating multiple metastatic nodules. Several of these are associated with fresh hemorrhage.



FIG. 6. (Case 4) Sections of cerebellum and brain stem again demonstrating multiple tumor metastases. The primary lesion was in the lung.

The association of the two principal findings which indicated an intracranial lesion and a disturbance in cardiac rate, do not necessarily have separate causes. Hemorrhage into and about several of the metastases may have contributed to the "stroke-like" clinical picture. Local compression or ischemia in the brain stem from either metastasis or hemorrhage can produce marked alterations in vegetative functions, dependent on their location. Disturbances in heart rate are not unusual with lesions of the brain stem, and either a bradycardia or tachycardia may be present as the clinical manifestation of dysfunction.

Discussion

Neurologic diagnosis should always be based on a careful history followed by a complete physical examination. Usually some clue will be present to raise the physician's suspicion of an intracranial lesion.

The brain, however, has a limited capacity to express dysfunction, and the various symptoms and signs are useful only to the degree of localizing the anatomic locations in the brain which are not functioning normally. A definitive diagnosis on clinical grounds alone in patients with cerebral dysfunction is subject to errors.

In vascular disease of the brain the most ischemic area will demonstrate dysfunction first. It must be emphasized that arteriosclerosis is a generalized disease which merely tends to be more severe in some arteries than in others and not in any predictable pattern from patient to patient. A relative stenosis of a left carotid artery may be tolerated without any signs whatsoever until some additional burden is placed on the cerebral circulation. This burden may be a sudden fall in cardiac output, severe anemia or antihypertensive medication. It may also be an occlusion of one of the remaining carotid or vertebral arterial contributions to the total cerebral blood flow. The anatomic location of an ischemic infarct will be in the area which had the most borderline circulation, and without angiographic visualization of all four arterial contributions to the cerebral blood flow the combination of stenosis and occlusion would not be correctly diagnosed.

Tumors produce signs in the brain by infiltration, pressure on cerebral tissue due to their expanding mass, obstruction to the circulation of the cerebrospinal fluid and compression of cerebral vessels.

The brain can react to these insults by compensation in total cerebral water content, adaptation of neural pathways, and collateral circulation. At some point compensation no longer is adequate and signs appear which may simulate an acute process, though in reality it has been silently progressing for some time.

There is no reliable way to differentiate a subdural hematoma, intracerebral tumor or aneurysm from an arteriosclerotic thrombosis, except by contrast studies.

Systemic disease which affects the central nervous system, such as arteriosclerosis and syphilis, does not afford "protection" from other intracranial pathologic entities. The presence of such systemic illness strongly supports a diagnosis on a statistical basis, but a definitive diagnosis should be established from objective evidence and not by probabilities alone.

Summary

A careful history and complete physical examination are vital, but may not be enough when dealing with intracranial disease.

The brain has a limited capacity to express dysfunction, and tumors, thrombosis and hemorrhage may all produce similar signs. With the addition of cerebral angiography and pneumoencephalography, the neurologist can at least diagnose these lesions reliably or at best differentiate the surgically correctable conditions.

Submucosal Nodules Of The Rectum

JOSEPH J. DODDS, M.D.,* Chattanooga, Tenn.

Submucosal nodules of the rectum are important to the physician primarily because of the possibility of the lesion being malignant. It would seem from the literature that these lesions are uncommon, though they are probably more frequently found than reported. In a series of 87 patients with submucosal lesions found at the Mayo Clinic up to 1947, the incidence of malignancy was 6.9 percent.[1] In a later series of 91 patients discovered in the interval between 1945 through 1951, 19.7% of the nodules were malignant.[2]

Most submucosal masses are small, 2 centimeters or less in diameter and usually are found by routine digital rectal or proctoscopic examinations. As a general rule they do not cause symptoms, though there are cases in which intestinal obstruction or bleeding has occurred as a result of mucosal erosion. These nodules have been classified into four main categories: (1) chemical, (2) inflammatory, (3) benign, or (4) malignant.[3]

The chemical variety is composed of lesions resulting from the injection of irritating solutions submucosally. Oleomas, as these lesions are called, were first recognized in 1917 and result from the injection or instillation of mineral or cottonseed oils. These oils are used as vehicles for the sclerosing solutions used in the treatment of hemorrhoids. Oleomas are composed of fibrous tissue, macrophages, small foreign body giant cells, and tissue spaces containing free oil. They may be of any size but average around 1.5 centimeters in diameter. Such a lesion is firm, and is covered by intact mucosa which may be free or adherent, and have no characteristic color.[2] In approximately 20% of cases they are multiple. Most of them are found within 6 centimeters of the dentate margin since this is the location of internal hemorrhoids; they have been found higher in the rectum, and may be seen on any wall but usually are anterior. A past history of injections is significant since oleomas may occur as long as 6 years after injection therapy. Up to 1947 approximately 56% of submucosal nodules seen at the Mayo Clinic were oleomas,[1] though by 1951 this figure had dropped to 22%.[2] This decline is probably due to a decrease in the use of sclerosing solutions in the treatment of hemorrhoids. Surgical excision is the only treatment required for chemical nodules.

Inflammatory lesions make up only a small percentage of submucosal nodules. In most instances these masses are accumulations of fibrous tissue showing acute or chronic inflammatory changes. They are small, firm lesions situated near the dentate margin.[2] Their etiology is unknown. Also included in this group are phleboliths, fecaliths, and submucous cysts.[4] All of these lesions are small and only rarely found. The recommended treatment of inflammatory lesions is surgical excision.

Benign neoplasms make up the majority of submucosal nodules. Included in this group are benign lymphomas, leiomyomas, lipomas, and fibromas. Benign lymphomas are the most frequent occurring lesion of the group. They were first described in 1890. These nodules arise from lymphoid follicles located in the submucosa,[5] and their true etiology is unknown. Although usually single and sessile in form, they may be multiple and in some instances are pedunculated. Benign lymphomas are small, firm nodules averaging 1.5 centimeters in diameter. They have no characteristic color, are covered by intact mucosa, and usually are freely movable.[6] This type of lesion is found more frequently in adult females. Often these nodules are seen within 10 centimeters of the dentate margin though they may occur anywhere in the rectum. Microscopically they have the appearance of a lymph node with the exception that there are no sinusoids. This nodule will not recur after complete excision and has never been reported as having undergone malignant degeneration.

*From the Earl Campbell Clinic Association, Chattanooga, Tenn.

The second most common benign rectal neoplasm is the leiomyoma which was first described in 1872.[2] These masses are usually firm and small, averaging 1.5 centimeters in diameter, occur near the dentate margin, and are covered by intact mucosa. This tumor may undergo sarcomatous degeneration.

Lipomas and fibromas are much less frequent. They are usually small, though lipomas in this region may become large enough to cause partial or complete obstruction.[4] Malignant change in a rectal lipoma or fibroma has never been reported. The treatment for benign nodules of the rectum is surgical excision.

By far the most important group is that of malignant lesions. Most of the submucosal nodules which fall into the malignant category are carcinoids, though other neoplasms such as leiomyosarcoma, malignant lymphoma, and adenocarcinoma occasionally occur in the rectal submucosa. These lesions have no characteristic distinguishing features which make them appear different from other less serious submucosal nodules. As stated before, the incidence of malignant lesions is approximately 20 per cent.[2]

Up to 1957 there have been 218 reported cases of rectal carcinoids, the first of which was reported in 1933.[7] Carcinoid tumors are thought to originate from the endocrine cells of the chromaffin system in the rectum, though this theory is not universally accepted.[2] These tumors occur with equal frequency in members of both sexes and are usually found in middle aged adults. Metastases are usually local and are most frequently found in patients above the age of 50 years.[7] They vary in color from white to yellow. When a yellowish hue is present it is due to the presence of cholesterol in the tumor. Most carcinoids are sessile, although some may be polypoid and occasionally may be annular in shape.[8] Only rarely do they erode and ulcerate the mucosa; when this occurs it is impossible to distinguish them from primary rectal adenocarcinoma.[3] The anterior rectal wall is the most frequent area where they are seen, and frequently they are within 5 to 10 centimeters of the dentate line. One must remember though that they may occur on any wall and at any height. Metastases occur by means of direct extension or by blood or lymphatic spread;[9] they are a later complication and distant metastates are very rare. The carcinoid syndrome has never been reported as occurring as a result of a rectally located tumor.[2] Most authors agree that the best treatment for small, 2 centimeter or less in diameter, lesions is local excision followed by fulguration. More radical surgery is indicated: (1) when the tumor is large and cannot be completely excised; (2) when it is fixed to perirectal structures; (3) when the lesion is recurrent; and (4) when it is in the form of an annular or constricting lesion.[7] Carcinoids are not sensitive to x-ray therapy.

Leiomyosarcomas, malignant lymphomas, and adenocarcinomas are very rare members of this group. Leiomyosarcomas have a tendency to be somewhat larger lesions, 2 to 8 centimeters in diameter.[2] These neoplasms may ulcerate and thereby cause rectal bleeding. Malignant lymphomas may represent local or systemic disease. If the disease is thought to be local, excision and fulguration, with or without x-ray therapy is the treatment of choice. Submucosal adenocarcinoma, when it occurs, is believed to be metastatic from elsewhere in the colon,[2] and therefore when this lesion is found the rest of the colon should be carefully examined.

In summary, submucosal nodules are usually asymptomatic and are discovered on routine examination. They have no characteristic distinguishing features to aid in the differential diagnosis. Approximately one-fifth of these lesions are malignant. Although the anterior rectal wall is often stated to be the commonest wall where submucosal nodules are found, this may be due to the fact that the anterior rectal wall is more available to careful examination.[10] If the lesions are small, simple surgical excision followed by fulguration is all the treatment required. There has never been a recurrence of a submucous nodule in patients treated in this manner at the Mayo Clinic.

References

1. Jackman, R. J.: Submucosal Nodules of the Rectum, Diagnostic Significance, Proc. Staff Meet. Mayo Clin. 22:502, 1947.

2. Swartzlander, F. C., Jackman, R. J., Dockerty, M. B.: Submucosal Rectal Nodules, Trans. Am. Proctologic Soc. pp. 657, 1956.

3. Jackman, R. J.: Submucosal Rectal Nodules with Particular Reference to Carcinoids, Am. J. Surg. 88:909, 1954.

4. Jackman, R. J. and Buie, L. A.: Submucosal Nodules of the Rectum, S. Clin. North America pp. 903, (Aug.) 1944.

5. Sniderman, B. F.: Benign Lymphoma of the Rectum, Trans. Am. Proctologic Soc. pp. 611, 1951.

6. Hayes, H. T. and Burr, H. B.: Benign Lymphoma of the Rectum, Trans. Am. Proctologic Soc. pp. 545, 1952.

7. Lamphier, T. A. and Ehrlich, R.: Carcinoid of the Rectum, A.M.A. Arch. Surg. 75:756, 1957.

8. Cohen, E. F.: Carcinoid Tumors of the Rectum, Trans. Am. Proctologic Soc. pp. 617, 1952.

9. Freund, S. J.: Carcinoid Tumor of the Rectum, Am. J. Surg. 93:67, 1957.

10. Jackman, R. J.: Lesions of the Lower Bowel. Springfield, Ill. Charles C. Thomas, 1958. pp. 139.

Supravalvular Aortic Stenosis—Underdevelopment and Characteristic Facies. Cyrus Farreki, Charles T. Dotter and Herbert E. Griswald. Amer. J. Dis. Child. 108:335 (Oct.), 1964.

A congenital syndrome was described which included supravalvular aortic stenosis, impaired growth, mental deficiency, and a characteristic facies. The patients eventually developed cardiac failure.

The diagnosis could be made on physical examination. The abnormal facies consisted of estotropia, broad and depressed nasal bridge, coarse pouting lips, and heavy cheeks. The patients were dissimilar to other members of their own families. There were signs of obstruction to ventricular outflow due to annual constriction of the aortic wall at the origin of the coronary arteries. There was physical and mental underdevelopment.

Three patients were presented which fitted the clinical syndrome, first described by Williams in New Zealand in 1961. The etiology is unknown. *(Abstracted for the Middle Tennessee Heart Association by Sarah H. Sell, M.D., Nashville.)*

CASE REPORT

Agenesis of the Odontoid with Chronic Subluxation of the Atlanto-Axial Articulation

Irving K. Ettman, M.D., and
Jerry C. Phillips, M.D.,* Memphis, Tenn.

The congenital absence of the odontoid process of the 2nd cervical vertebra with associated subluxation of the atlanto-axial articulation is uncommon but not a rare anomaly. Numerous cases have been reported since Roberts[1] first reported this anomaly in 1933.[2-7] Gwinn[8] reported 4 cases of absence of the odontoid process seen within one year in children under one year of age. The appearance of symptoms associated with subluxation of the atlanto-axial articulation may not become apparent for many years. It is when vascular and neurologic signs or symptoms referable to the cervical spine occur that this anomaly may become apparent. Rowland[6] in reviewing 17 cases, found that the onset of neurologic symptoms is quite variable, appearing between 8 and 56 years of age. Dunbar[9] recorded symptoms first appearing 10 to 40 years after the original injury, as described in 6 cases following atlanto-axial dislocation. Ford[10] described a patient, age 17, with attacks of unconsciousness, and disturbances attributed to intermittent obstruction of the vertebral artery which was associated with excessive mobility of the 2nd cervical vertebra and absence of the odontoid process.

Case History

A 45 year old man was referred to the X-ray Department for examination of the cervical spine because of neck pain and weakness in the arm and legs. This examination revealed the absence of the odontoid process and subluxation of the atlanto-axial articulation. (Fig. 1.) The patient had been admitted because of a recent onset of genitourinary complaints. He also described episodes of dizziness, lightheadedness, blurring of vision, sweating, and generalized weakness during the past year. These attacks might come on at any time, though similar symptoms were brought on by sudden turning or lifting of the head, and recently weakness of the left leg and both arms were noted. The patient had been a boxer during his youth, but had never been "knocked out" or suffered any serious injury.



FIG. 1. A.P. open mouth view of the cervical spine shows the absence of the odontoid process.

Neurologic examination revealed the cranial nerves to be intact and without evidence of impairment of sensory modalities. The Romberg test was negative and vibratory sense and sterognosis was normal. There was no evidence of muscular atrophy and muscle strength was normal in all extremities. The gait was slightly widespread; deep tendon reflexes were slightly increased on the left with unsustained clonus of the left ankle.

Roentgen findings. Examination of the cervical spine revealed marked degenerative changes involving the 4th, 5th, 6th and 7th cervical vertebrae in the form of lipping, with narrowing of the intervertebral spaces, especially between the 6th and 7th cervical vertebrae, and there was encroachment of the intervertebral foramina of cervical vertebrae involved (Fig. 2). The open mouth view revealed absence of the odontoid process, and on the lateral view there was posterior displacement of the atlas in relation to the axis. It was interesting that when the chin was supported and the head in slight extension the abnormal alignment of the atlas and axis was obliterated. Tomograph examination of the cervical spine confirmed these findings. (Fig. 3.) A myelogram showed no evidence of encroachment of the spinal canal in the region of C1 and C2, with slight indentation of opaque media by the posterior lipping in the region of C4 and C5.

The patient was referred to the Department of Orthopedic Surgery where a bony fusion was performed.

Discussion

The case described follows the pattern of

*From the Department of Radiology, Veterans Administration Hospital, Memphis, Tenn.



FIG. 2. (A) Lateral view demonstrates posterior displacement of the atlas on the axis with associated degenerative changes involving the lower cervical vertebrae. (B) Lateral view but with slight extension and chin supported with apparent obliteration of the subluxation of the atlanto-axial articulation.

cases reported by others with a late onset of symptoms.[4,5] This appears to be the pattern whether subluxation of the atlanto-axial articulation is the result of trauma or due to agenesis of the odontoid process. The reason for a delay in onset of symptoms may be attributed to several factors: (1) In many individuals during childhood and young adult life, the ligaments and musculature of the cervical spine are strong enough to maintain alignment of the cervical vertebrae. (2) The results of long-standing physiologic stress often results in ligamentous and osseous degeneration with changes occurring in the existing anomaly and involvement of the adjacent cervical vertebrae. (3) The loss of mobility of the lower cervical spine below the subluxation, with excessive mobility at the atlanto-axial articulation, will cause encroachment upon the cervical cord and nerve roots, as well as intermittent obstruction of the vertebral artery.[11] The loss of mobility and pain in the cervical region, the result of marked degenerative changes, first drew attention to the cervical spine in this patient, thus revealing evidence of the pre-existing anomaly.

The involvement of the vertebral artery in this patient is highly probable, since symptoms were transitory and were brought on by sudden rotation or tilting of the head. A brief review of the course of the vertebral artery and its relation to the atlas, as well as the atlanto-occipital region, would be helpful in accounting for the associated vascular changes resulting from prolonged subluxation of the atlanto-axial articulation. The vertebral artery which supplies blood to the brain passes through the transverse foramina of the first six cervical vertebrae, and after passing from the foramen of the axis, the artery has to incline laterally to ascend to the foramen of the atlas; after leaving the foramen of the atlas it turns medially and backward to groove the superior aspect of the posterior arch of the atlas. The artery then enters the skull through the foramen magnum uniting with the fellow of the opposite

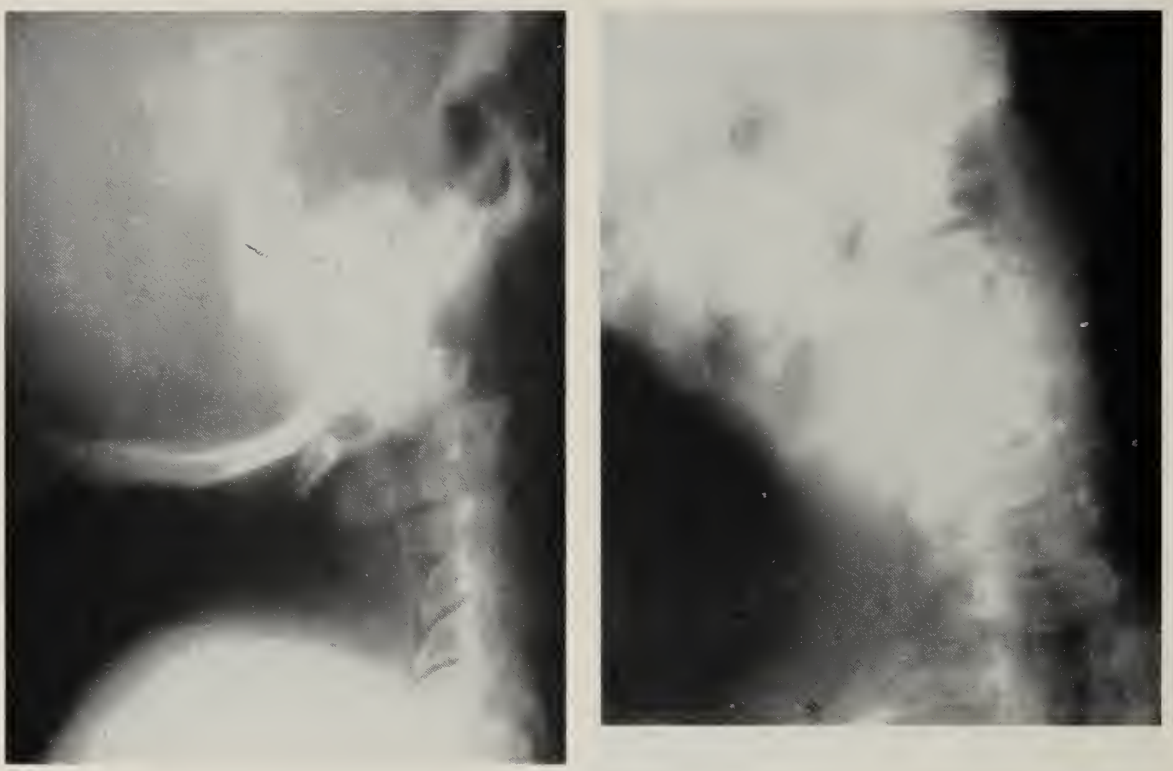


FIG. 3. (A) Laminograph of lateral view of the spine in hyperextension, demonstrating the atlanto-axial subluxation. (B) Laminograph in AP view with the head tilted to the right showing evidence of lateral displacement.

side to form the basilar artery.[12] The continued posterior displacement of the atlas would cause considerable strain on the vertebral artery, and the compression of the vessel will result in vertebral insufficiency.

In addition to the agenesis of the odontoid and the associated subluxation of the atlanto-axial articulation, there were noted marked hypertrophic changes or spondylosis of the cervical spine involving the 4th, 5th and 6th cervical vertebrae. Brain[13] preferred the term spondylosis rather than spondylitis because he thought this condition was noninflammatory. Spondylosis has been attributed to repeated and accumulated minimal injuries resulting from constant motion of the cervical spine and its joints and ligaments. The instability of the atlanto-axial articulation, both in the posterior and right lateral directions, may be a factor in the changes noted in the lower cervical region. Degenerative changes may occur with static deformities, and is more common after a long continued trauma rather than a single severe trauma.

Spondylosis of the cervical spine may be lethal in itself, producing symptoms which require hospitalization. Munro[14] found that 14% of 113 patients with proven spondylosis cervicalis in the absence of any accident required hospitalization for symptoms.

Spondylosis cervicalis originates with degeneration of one or more intervertebral discs. Evidence of spur and osteophyte formation is noted along both the anterior and posterior articular margins of the adjacent vertebrae. The cervical intervertebral spaces are narrowed, and there is flattening of the normal curvature of the spine with flattening of the canal. Trauma is poorly tolerated and may cause neurologic symptoms when the spurs project posteriorly into the spinal canal and foramina, producing pressure effects and secondary disturbances of the cord. Symptoms may be progressive as result of the pressure.

The diagnosis of absence of the odontoid with associated subluxation depends on roentgen examination of the cervical spine. Subluxation of the atlanto-axial articulation may be overlooked by the radiologist if proper positioning of the patient is not maintained. Normally the deformity of subluxation of the atlanto-occipital articu-

lation is best seen in the lateral view. However, if the head is extended and the chin supported, a deceptively normal alignment may appear on roentgenograms.

Conclusion

(1) A case of agenesis of the odontoid process with atlanto-axial dislocation is presented. This was an unexpected finding noted during x-ray examination of the cervical spine.

(2) The diagnosis of this anomaly is made by radiologic examination and the importance of positioning of the patient is stressed.

(3) Spondylosis cervicalis was an additional finding in this patient.

(4) Neurologic and vascular changes were noted involving the cervical cord and nerve roots which may be the result of either instability of the atlanto-axial articulation, or secondary to degenerative changes of the lower cervical vertebrae.

References

1. Roberts, S. M.: Congenital Absence of Odontoid Process Resulting in Dislocation of Atlas on Axis, J. Bone & Joint Surg. 15:988, 1933.

2. Fullenlove, T. M.: Congenital Absence of Odontoid Process: Report of Case, Radiology 63: 72, 1954.

3. Schultz, E. H., Levy, R. W. and Russo, P. E.: Agenesis of Odontoid Process, Radiology 67:102, 1956.

4. Schiller, F. and Nieda, I.: Malformation of Odontoid Process: Report of Case and Clinical Survey, California Med. 86:394, 1957.

5. Fromm, G. H., et al.: Late Progressive Quadriparesis Due to Odontoid Agenesis, Arch. Neurol. 9:291, 1963.

6. Rowland, L. P., Shapiro, J. H. and Jacobson, H. G.: Neurological Syndromes Associated With Congenital Absence of Odontoid Process, Arch. Neurol. & Psychiat. 80:286, 1958.

7. Teplick, J. G., Steinberg, S. and Adelman, B. P.: Congenital Absence of Odontoid Process: Report of Case, Am. J. Roentgenol. 83:653, 1960.

8. Gwinn, J. L. and Smith, J. L.: Acquired and Congenital Absence of Odontoid Process, Am. J. Roentgenol. 88:424, 1962.

9. Dunbar, H. S. and Bronson, S. R.: Chronic Atlanto-axial Dislocation with Late Neurologic Manifestations, Surg. Gynec. & Obst. 113:757, 1961.

10. Ford, F. R.: Syncope, Vertigo and Disturbance of Vision Due to Defect in Odontoid Process and Excessive Mobility of Second Cervical Vertebra, Bull. Johns Hopkins Hosp. 91:168, 1952.

11. Schlesinger, E. B. and Taveras, J.: Lesions of Odontoid and Their Management, Am. J. Surg. 95:641.

12. Lockhart, R. D., Hamilton, G. F. and Fyfe, F. W.: Anatomy of the Human Body. Philadelphia. J. P. Lippincott Co., 1959. p. 606.

13. Brain, W. R., Northfield, D. and Wiebenson, M.: Neurological Manifestations of Cervical Spondylosis, Brain, 75:187, 1952.

14. Munro, D.: Relation Between Spondylosis Cervicalis and Injury of the Cervical Spine and Its Contents, New England J. Med. 262:839, 1960.

Cardiac Arrest and Resuscitation. By Hugh E. Stephenson, Jr., M.D., Professor of Surgery, University of Missouri School of Medicine, Columbia, Mo. Second edition, 494 pages, illustrated. St. Louis: The C. V. Mosby Company, 1964. Price $15.00.

The author presents an exhaustive review of the subject of cardiac arrest and methods of resuscitation. The history of cardiac resuscitation is traced from the first experimental efforts of Versalius in 1543, to the first successful cardiac resuscitation in a human being by Igelsrud of Norway in 1901, and thence to the advances in reviving the arrested heart recorded in the past two decades. The mechanism, diagnosis, management, post-resuscitative care and prognosis of patients with cardiac arrest are presented in a clear, thorough and yet concise manner. Equally informative sections present the pitfalls and complications of resuscitation. Of especial value to physicians, whether general practitioner or specialist, is the presentation of the details, all of the usual and unusual clinical situations likely to be complicated by cardiac arrest, special considerations of treatment, and measures to prevent the arrest of cardiac activiy in the many varied circumstances. The extensive bibliography is of special value to the researcher. More recent advances in the knowledge of resuscitation, such as closed chest cardiac compression, closed chest defibrillation, pacemaking devices, hyperbaric oxygenation and hyperthermia are discussed in appropriate sections. The relative merits, indications and contraindications of open chest versus closed chest resuscitation are presented. This volume should be standard equipment in every Emergency Service.

A Simple And Effective Method of Anchoring The Testis In Orchiopexy

J. R. BOWMAN, M.D.,* Johnson City, Tenn.

The postoperative course following orchiopexy varies with the method of anchoring the testis in the scrotum. For example, with at least one technic, a secondary operation is necessary, and it and other procedures require prolonged bed rest, often with splinting of the involved extremity to prevent motion and possible trauma to the spermatic cord and testis.

Torek's operation, now largely abandoned, anchors the testis to the fascia of the upper inner thigh after it has been delivered through the scrotum, an operative procedure requiring prolonged bed rest and later requiring a secondary operation, also raising the question of trauma to the fixed organ and cord structures.[1]

The Bevan and Prentiss technics anchor the testis in the scrotum by means of a suture through the lower pole of the gonad and out of the scrotum and attached to the skin, or to a rubber band secured to the thigh. These methods of traction imply bed rest, and the degree of tension varies with the position of the extremity; splinting of the limb may be required to avoid motion, variable tension, and possible trauma to the testis and cord structures.[1]

For a number of years, I have used successfully and effectively a simple technic for anchoring the testis by passing a silk suture through the lower pole and out the most dependent area of the scrotum where it is tied over a small roll of Telfa (Figs. 1B and C). As soon as the patient is able, he is allowed to walk, and thereby the soft scrotum along with the slight swelling exerts gentle traction on the testis and spermatic cord. Even in the instances where some tension, because of shortness of the spermatic cord, slightly invaginates the scrotum (Fig. 1B), the testis eventually assumes a normal scrotal position as shown in (Figs. 1B, C and D).

Comment. Anchoring the testis to the scrotum obviates prolonged bed rest and lessens the chances of trauma since movement of the extremity does not alter the tension. Complications have not been as common as I have encountered previously using other technics or as reported in the literature.[2] The success of the method implies, as in other technics, a sufficient

*From the Bowman Clinic in Johnson City, Tenn.

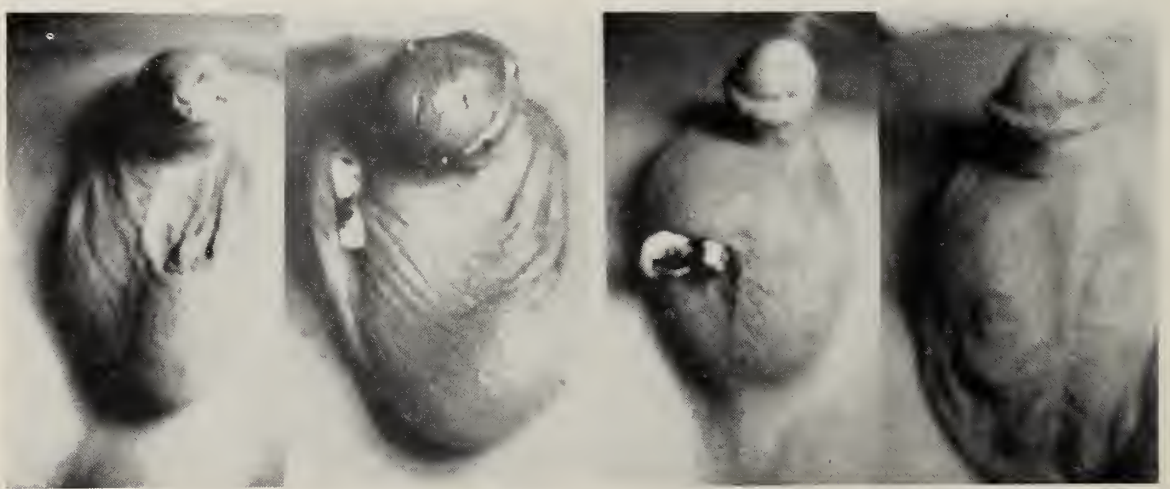


FIG. 1. (A) Preoperative status in a 6 year old. (B) Immediately postoperative—note slight invagination of scrotum due to tension. Patient has been circumsized. (C) Ten days postoperative—right testis is still slightly high but lower than immediately after operation. (D) Three months postoperative—testis in normal position. Note dimple at site of emergence of suture.

lengthening of the cord structures or a shortening of the course of the latter by proper dissection prior to anchoring the testis in the scrotum. Since it does not interfere with diapering or the wearing of apparel by older children, the technic can be suitably adapted to any age period. That the method is successful, is attested by the comfort of the patient, the appreciation of the parents, and the normal position and consistency assumed by the testis in the postoperative period (Fig. 1D).

Summary

(1) The technics of anchoring the testis in orchiopexy have been reviewed briefly. (2) A new, simple, effective and comfortable method which allows early ambulation is presented.

References

1. Flocks, R. H. and Culp, David: Surgery of the Testes; Surgical Urology. Chicago, The Year Book Publishers Inc., 2nd Ed., 1961, p. 360.

2. Gross, R. E.: Undescended Testicle (Cryptorchidism); The Surgery of Infancy and Childhood. Philadelphia, W. B. Saunders Company, 1953, p. 467.

Current Medical Terminology, Chicago, Illinois, American Medical Association, 1964, 476 p. Price $2.00.

The second edition of CURRENT MEDICAL TERMINOLOGY published by the A.M.A. contains, according to the foreword, 837 new terms which include "tumors and conditions in obstetrics, gynecology, psychiatry, pediatrics and poisoning." A sample examination of the pages covering terms beginning with the word "heart" revealed the addition of the following: Heart, arrest; Heart, block, sino-atrial; Heart, ectopy; Heart, ischemic; Heart, rheumatoid; Heart, rupture; Heart, thyrotoxic disease.

The major revision in this 1964 edition is the addition of the Concordance Index, which is a computer-produced keyword index to selected "preferred names, additional terms and signs." The use of the index involves locating the appropriate word grouped with the correct descriptive phrases, noting the number given in the right-hand column, and turning to the numerical index to find this number and with it the proper main entry word under which to check in the main portion of the dictionary. The foreword states that this index "serves, in part, as a substitute for cross references in the main section." Yet a comparison of the fifteen "see" references used in pages 1 to 5 of the first edition, with the Concordance Index and the main section of the 2nd Edition yielded the following terms of which no mention could be found: Abscess, perirectal; Abo incompatibility; Abrasion; Abscess, intracranial (two entries in CT 1963); Abscess, epiploic; Abscess, lacrinal sac; Abscess, mammary gland.

An explanation for the incomplete indexing of alternate terms could be that the new edition of CURRENT MEDICAL TERMINOLOGY does index signs or symptoms of disease. The foreword states that the "size of the final index has been limited since full coverage would require approximately 800 pages." It appears that indexing of symptoms and signs of disease has been done at the expense of complete indexing of alternate terms. The total space consumed by the inclusion of symptoms would undoubtedly be adequate for those alternate terms which were left unindexed.

The new Concordance Index in CURRENT MEDICAL TERMINOLOGY 1964, with its coverage of both alternate terms and symptoms of disease, raises the question as to what is the aim of the work. The JAMA (182:401, 1962) indicates that the purpose is to establish "a system of disease terminology that is simpler and more standardized than its predecessors. . . ." The foreword to CURRENT MEDICAL TERMINOLOGY 1963 calls the work a "terminology reference book." Is this purpose best served by indexing symptoms of disease at the expense of indexing alternate terms for disease? CURRENT MEDICAL TERMINOLOGY is still a convenient and useful reference tool, but it could be improved if the editors would decide what the purpose of the book is to be and then base all decisions on inclusion of material on this purpose and not on what the computer has the ability to produce.

STAFF CONFERENCE

West Tennessee Tuberculosis Hospital*

Sarcoidosis and Cryptococcosis

DR. C. B. McCALL: On consecutive weeks we have seen at our chest conference a series of 4 interesting patients who had in common mediastinal adenopathy and the histologic diagnosis of sarcoidosis. The first of these patients has had no additional diagnosis. The second patient subsequently had a positive sputum culture for *Mycobacterium tuberculosis,* and the third patient subsequently had *Histoplasma capsulatum* identified in a node biopsy. The fourth patient subsequently developed pulmonary parenchymal and systemic signs and symptons and is the patient for discussion today. She will be presented by the attending physician, Doctor Blumenfeld.

DR. HARRY BLUMENFELD: *Present Illness:* D. N., a 29 year old negro maid, was admitted to the West Tennessee Tuberculosis Hospital on July 3, 1963, because of fever, night sweats, malaise, weakness, vague abdominal pain, skin lesions for 6 months, and a 20 pound weight loss which had begun 3 months previously.

She was first seen at the University of Tennessee out-patient clinic in Feb., 1955, for a routine prenatal visit. The only abnormality detected at that time was mild iron deficiency anemia. The subsequent delivery of her 2nd child was uncomplicated.

In Dec. 1959, a routine pre-employment chest x-ray demonstrated a right mediastinal mass and in March, 1960, she was hospitalized in the City of Memphis Hospitals. At this time there were no symptoms, and physical examination was normal. Histoplasmin and intermediate PPD. skin tests were negative. Examination and culture for acid-fast organisms and fungi of sputum, bronchial washings, bone marrow, and supraclavicular node biopsy were all negative. Exploratory mediastinotomy revealed an approximately 8 x 5 cm. mass of matted, grayish-brown, firm lymph nodes. Microscopic examination was consistent with Boeck's sarcoid, and special stains and cultures failed to reveal a specific etiology. She subsequently remained well until the present illness.

About 6 months prior to the present admission she developed several asymptomatic papular skin lesions followed about 3 months later by the systemic symptons which led to hospitalization.

Physical examination revealed a well-nourished, febrile, moderately ill negro woman. B.P. was 120/70 mm. Hg., P. 80, R. 20, and T. 99.6°F. Positive findings were limited to the skin and lymph nodes. Skin lesions were found on the ear, face, and back as follows: (1) scaly erythematous dermatitis involving the helix and tragus of the right ear and adjacent skin; (2) a 5 mm. elliptical, firm, papular lesion of the chin; (3) multiple, tiny, papular lesions of the left upper eyelid, face, and nose; and (4) two 5 cm, well-circumscribed, firm, papulonodular lesions overlying the lumbar spine and a similar lesion of the left knee. Axillary and inguinal lymph nodes were definitely enlarged, and nodes were easily palpable in the neck. The liver and spleen were not enlarged.

Laboratory Results: PCV. was 35 mm. and the WBC. count, 7,250 with 4% P.M.E., 33% P.M.N., 46% lymphocytes, and 12% monocytes. Urinalysis was normal. Total serum protein was 7.3 Gm. per 100 ml. with 3.6 albumin and 3.7 globulin with 2.2 gamma globulin. Alkaline phosphatase was 4 Sigma units on admission and subsequently rose to a high of 37. Initially normal values were obtained for serum sodium, chloride, potassium, carbon dioxide, BUN., and calcium. Intermediate PPD. and histoplasmin skin tests were repeatedly negative.

Review of chest films showed only the stable appearing right paratracheal lymphnode enlargement without pulmonary infiltration until Aug. 20, 1962, when there appeared moderately extensive infiltration especially in the right lung and to a lesser extent in the left upper lung field.

Course in Hospital: The patient's initial hospital course was characterized by general malaise and daily T. to 101°F. Two weeks after admission there appeared two, hot, tender, subcutaneous nodules on her thighs. At this time the first of several sputum cultures were positive for *Cryptococcus neoformans.* Several tissue biopsies were obtained for culture and pathologic examination as follows. (1) Biopsy of skin and subcutaneous tissue of subcutaneous nodule from right thigh revealed a granuloma with abscess formation and easily seen and cultured *C. neoformans.* (2) Excisional biopsy of the nodule of the right calf revealed a granulomatous reaction in which *C. neoformans* was seen and cultured. (3) Excisional biopsy of the left axillary node revealed a sarcoid reaction, and no organisms were seen or cultured. (4) Biopsy of the skin and subcutaneous tissues of the left knee revealed sarcoid reaction, and no organisms were seen or cultured. (5) Biopsy of the skin lesion of the right ear revealed a granulomatous reaction from which *C. neoformans* was subsequently cultured.

Spinal fluid showed a normal cell count and protein as was the India ink preparation. Subsequent cultures showed no growth.

The patient was started on treatment with intravenous amphotericin-B and over the next 4 months received a total of 2.5 Gms. The patient

*From the Pulmonary Disease Section of the Department of Medicine, University of Tennessee College of Medicine, and the West Tennessee Tuberculosis Hospital, Memphis, Tenn.

From the Executive Director

MEDICAL DIGEST

News of Interest to Doctors in Tennessee

Senate Committee Looks into M.D. Ownership of Drug Firms

● The Senate Anti-Trust and Monopoly Subcommittee has concluded hearings on the problems of physician ownership of pharmacies and drug repackaging firms. Results are pending.

The AMA has adopted the following policies on physician ownership of pharmacies and repackaging plants:

PHARMACIES—"Drugs, remedies or appliances may be dispensed or supplied by the physician provided it is in the best interest of the patient. Under this language, it cannot be considered unethical for a physician to own or operate a pharmacy provided there is no exploitation of the patient."

REPACKAGING COMPANIES—"It is unethical for a physician to have a financial interest in a drug repackaging company." The Judicial Council of the AMA defines a repackaging company as follows: "The term 'repackaging company' refers to a drug company which markets under its own label or trade name drug products manufactured by others with the objective that physicians having financial interest in the company will prescribe its drugs to patients."

Did You Know?

● Did you know that at the close of December, 1963, Tennessee had 698,000 persons covered with major medical insurance. Also 50 to 75% of the civilian population of the state is covered with some form of voluntary health insurance.

Beware!

● Recent changes in Federal Income Taxes and Withholding Rates are tricky—some effective immediately, some in the future. Internal Revenue Service warns situations may cause error in estimating tax liability. Also, changes were made regarding dividends, investment credits, certain tax exclusions, other categories. Best bet is to have your accountant make a careful check of your situation.

Pocket Health Card Now Available

● Previously approved by the Tennessee Medical Association, a pocket health card has now been printed and is available for distribution, prepared jointly by the Tennessee Medical Association and the Tennessee Department of Public Health. The card, wallet size, contains an immunization record and identification card including other information relative to health insurance, policy numbers, and other important data. The information contained on the card will prove invaluable at all times.

Physicians can obtain quantities of the cards for their patients through their respective county health department offices. The Tennessee Medical Association will also have a supply on hand for any physician desiring the cards to be sent to his office. Every TMA member is urged to make these available to their patients.

TMA Major Hospital Insurance Plan Changed

● Members of the Association already have or will soon receive an explanatory letter from the carrier relative to coverage under the Revised Major Hospital Insurance Plan for members of TMA. This type of coverage is the least desired by insurance carriers and their recent experience has not been good. The American Casualty Company, underwriter of the plan, has found it necessary to make some changes. The TMA Insurance Committee compared the revised plan with the proposals of six other companies and found them not as good as the present revised plan. Therefore, the committee agreed to continue the plan with the new revisions. These include: (1) After the deductible amount, the contract pays 85% of the cost. (This previously was 100%.) (2) Nurses coverage was increased to 85% of the charge instead of 75%. (3) Psychosis, alcoholism, improper use of drugs are not covered. (4) $100 deductible plan changed to $300 deductible. Premiums remain the same and policy still pays in addition to other insurance.

Coming—Certification For Your Girl Friday

● The first certification examinations have been conducted by the American Association of Medical Assistants, and 24 ladies out of a field of 108 emerged with certificates designating them as "Certified Medical Assistants". The certification program is designed to help physician-employers identify those who are qualified as top-level office assistants, and to establish high professional standards for ladies serving as office nurses, medical assistants, medical secretaries, receptionists, etc. Tests are given in five categories, and your girl Friday, if she passes, may become certified as either an Administrative Medical Assistant or a Clinical Medical Assistant.

Conference Committee Was Firmly Deadlocked on Medicare

● The Medicare Social Security legislation, killed by a deadlock in the Conference Committee in the 88th Congress, resulted in an unsolvable deadlock. The majority of the Senate members held out for the Administration's Medical Care of the aged plan and the majority of the House members would not accept the program. The House, ignoring Medicare, voted a straight five percent increase in monthly payments. The Senate, in addition to approving the Medicare amendment, decided on a flat $7 per month increase, adding up to considerably more than the House five percent. Senate benefits would require a payroll tax of over 10% when the plan is in full operation, a level that even many Medicare sponsors say is too much for the economy to stand.

There is a possibility that a special session may be called after the election when the whole Medicare-Social Security question could be taken up in late November.

Military Dependents Medical Cases in Tennessee

● During the period of January through June, 1964, 3,877 (Medicare dependents in the Armed Services) cases in Tennessee were paid, representing a total payment of $308,-509.87 made to physicians.

Malpractice

● Checked your Malpractice insurance recently? AMA's recent survey, showed one out of every six physicians in the U. S. face a claim or lawsuit, and should be reminded to check their coverage. Situations and practices change. It may indicate need for changes in the type and extent of your Malpractice coverage.

Public Service

THE TENNESSEE TEN

Hadley Williams, Public Service Director

Kerr-Mills Benefits Continue to Rise

● During the first nine months of 1964 more than $2.1 million was expended in Tennessee for medical benefits under the Medical Aid for the Aged (Kerr-Mills) program. This figure represents an amazing 161% or $1.3 million increase as compared with expenditures for the same period in 1963.

Department of Public Welfare figures show that $1,433,267 has been dispersed to provide 63,803 days of hospitalization, $412,241 to fill 94,882 drug prescriptions and $271,779 to provide 74,194 days of nursing home care during the first nine months of 1964. When compared with figures for the same period in 1963, days of hospitalization more than doubled, days of nursing home care increased 2½ times while the number of drug prescriptions filled increased more than 5½ times.

A total of 12,409 new applications under the program were approved during the period which represents an increase of 35% over 1963. Just over 35,000 persons, age 65 and over, have been certified for benefits under the MAA program since its inception in mid-1961. There are currently 26,365 persons eligible for the hospitalization, nursing home or drug benefits.

Dr. R. H. Kampmeier, president of TMA, in noting the continuing rise in recipients as well as funds expended under the program said, "These tremendous increases in Tennessee's Medical Aid for the Aged program substantiate the medical profession's feeling that Kerr-Mills is a good program and is fulfilling the concept of helping those who need help."

Rural Health Conference Held

● The Second Tennessee Rural Health Conference, co-sponsored by the Tennesse Medical Association, Tennessee Farm Bureau Federation and the University of Tennessee Agricultural Extension Service was conducted October 1st in Jackson at the New Southern Hotel.

More than 120 physicians, farm bureau personnel and extension service personnel registered for the one-day affair. Appearing on the excellent program were Mr. Clyde York, Tennessee Farm Bureau president, R. H. Hutcherson, M.D., Commissioner of the Tennessee Department of Public Health, Alexander Leech, D.V.M., president of the Tennessee Veterinary Medical Association, Mr. Ed Tanquary of International Harvester Company, Mr. Bernard P. Harrison, Director of the AMA's Legislative Department and Dean Webster Pendergrass of the University of Tennessee's College of Agriculture.

Dr. Julian C. Lentz, of Maryville, is chairman of the TMA Rural Health Committee.

PR Aids for Doctor Employees

● A new booklet entitled "Winning Ways With Patients" is an excellent public relations aid for doctor's receptionists, secretaries and medical assistants. Published by the AMA, this 22-page booklet gives tips for employees to follow in improving office public relations. How to take the hating out of waiting, good business practices, telephone tactics and many other topics are discussed with suggestions for improvement outlined.

Each physician depends on his employees to practice the kind of public relations in his office that will make more friends for him and for the medical profession as a whole.

Every doctor should give one of these booklets to each employee and have a supply on hand for new workers.

They are free from your Public Service Director's office.

A Review of the 88th Congress

● The following short review of the 88th Congress was taken from the AMA's final Legislative Roundup.

Adjourning on Saturday, October 3, the 88th Congress passed into history. By almost any measure, the 88th had a busy and eventful two-year term. Approximately 20,000 bills had been introduced in the House or Senate. Of these, 850 affected medicine, medical care, or the public health. The AMA presented its views on pending legislation on 25 occasions as well as providing 16 informational statements to various committees of Congress . . . It took nearly 61,000 pages in the Congressional Record to record the 88th Congress' deliberations of the various proposals which came before it. In addition, many more thousands of pages of testimony were recorded in the published proceedings of the public hearings which were held in connection with pending legislation. For example, the hearings of the House Ways and Means Committee on H.R. 3920, the King-Anderson bill, filled five volumes and ran to over 2,500 pages.

Some of the more major measures of medical interest which were enacted into law were: the Health Professions Educational Assistance Act which provides construction grants for the construction of teaching facilities and a student loan program; Maternal and Child Health and Mental Retardation Planning Amendments providing grants to help meet the cost of special projects, research, and other activities; Mental Retardation Facilities and Community Mental Health Centers Construction which authorizes grants for the construction of research and clinical facilities, and for community mental health centers; Clean Air Act expanding the federal government's roll in air pollution control; Hospital and Medical Facilities Amendments which extended for five years the Hill-Burton hospital construction grant program and adding to it grants for the modernization of existing facilities and for area-wide health facilities planning programs; and the Nurse Training Act authorizing grants for the construction and modernization of nursing schools, and establishing a loan fund for student nurses.

Several other bills of interest to medicine failed to gain approval of both houses of Congress, and died with the adjournment of the 88th Congress. Included were: a water pollution control measure; reorganization of the U. S. Public Health Service; the creation of an "Office for Senior Citizens" in the Department of Health, Education and Welfare; the King-Anderson medicare-tax proposal; chiropractic care for federal employees under the Federal-Employee's Compensation Act; a psychotoxic drug control program; and a bill which would have exempted non-profit blood banks from the anti-trust laws.

Many of the measures which were not favorably acted upon during the 88th Congress will be reintroduced after the 89th Congress convenes on January 4, 1965.

Blue Cross vs King-Anderson

● Medical Economics reported in a recent issue that Blue Cross of Northeast Ohio paid a claim for $26,110.36 for an 81-year-old woman's two-year hospital stay. The top federal payment under the Administration's proposed health plan would have paid $3,130.

Thought for the Month

● The man who is a pessimist before forty-eight knows too much; the man who is an optimist after forty-eight knows too little.—Mark Twain.

tolerated this toxic drug moderately well, although anemia and hypokalemia required intermittent cessation. Although she showed slight clinical improvement initially, the x-ray picture after several months actually showed more parenchymal disease. She continued to have a low-grade fever, and abnormal liver function studies persisted. *Cryptococcus neoformans* was not grown from her sputum after the onset of treatment. Needle biopsy of the liver revealed numerous noncaseating granulomas with typical sarcoid reaction. Repeat biopsy of the skin lesion on the right ear showed a similar granulomatous reaction, but again no organisms were seen or cultured.

Because of the importance of determining whether the active process shown on serial x-ray and clinical course was the result of sarcoidosis or cryptococcosis, lung biopsy was performed on Jan. 29, 1964. Special stains and cultures were all negative and histologic examination revealed noncaseating granulomatous inflammation with hyalinization and scattered Schaumann bodies consistent with sarcoidosis. At this time, the BSP. showed 17% retention in 45 minutes and the alkaline phosphatase had risen to 37 Sigma units.

It was therefore thought the patient's symptomatology was due not to cryptococcosis but more likely to sarcoidosis. On Feb. 10, the patient was placed on 20 mg. prednisone daily and concommitant 50 mg. amphotericin-B intravenously twice weekly. Over the subsequent 6 weeks there was definite clinical improvement as shown by disappearance of fever, decreases in size of skin lesions, weight gain, fall in alkaline phosphatase toward normal, and significant improvement in chest x-ray.

On March 10, the patient had a rather massive upper gastrointestinal hemorrhage requiring transfusion with 8 pints of blood. An active duodenal ulcer was subsequently demonstrated and it was thought desirable to gradually decrease and discontinue the steroid therapy. The duodenal ulcer responded to a medical regimen, and she has maintained her clinical and x-ray improvement to date.

DR. McCALL: The patient has kindly consented to answer any questions and allow us to demonstrate the skin lesions which have been of much interest. Doctor Rosenberg, would you like to describe these lesions?

DR. WILLIAM ROSENBERG: The cluster of small papules on her eyelid is rather typical of sarcoidosis. Skin lesions occur in only about 10 per cent of patients with cryptococcosis, which is itself a rather uncommon disease. When skin lesions do occur in cryptococal infection, they may be so varied that a clue is not given to the etiology except in the acne-form type.

DR. McCALL: If there are no questions of the patient, Doctor Carroll, would you discuss the x-ray examinations?

DR. DAVID CARROLL: PA x-ray examinations of the chest made in July, 1959, and January and March, 1960, all reveal a rather marked degree of lymphadenopathy in the right paratracheal region with little, if any, definite lymphadenopathy in either hilum. The right paratracheal lymphadenopathy contains no calcium. Heart and lungs are otherwise negative.

Films of the chest made in August 1962, July and December 1963, and January 1964, all reveal no evidence of hilar or mediastinal lymph node enlargement. The paratracheal group of nodes has been surgically removed. A mild pleural reaction at the lateral right base is thought to represent a post-surgical phenomenon. This group of films shows a very slowly progressive and rather extensive nodular density throughout both lungs with some associated general pulmonary fibrosis—particularly in the right upper lobe. Films of both hands made in September, 1963, fail to show either the lacey osteoporosis of bone or the punched-out lesions sometimes seen in sarcoidosis. The only abnormality is an old, healed fracture of the left fifth metacarpal.

Film of the chest in March, 1964, shows definite clearing of the nodular densities in both lungs and reduced prominence of the fibrotic strands in the upper lobes.

All of the pulmonary and intrathoracic lymph node findings could easily be explained on the basis of sarcoidosis. It is unusual for the lymphadenopathy to involve the paratracheal regions only, but it is characteristic of sarcoidosis in that there is no calcification. The nodular density pattern in both lungs and the pulmonary fibrosis are commonly seen in sarcoidosis, and it may well be that the improvement seen on the last film was a result of steroid therapy.

DR. McCALL: Mediastinal lymph node enlargement is said to be present in almost half of the patients with sarcoidosis but rarely, if ever, seen in cryptococcosis. Calcification or cavitation is rarely seen in either of these diseases. Bone lesions are relatively rare in cryptococcosis but do occur in approximately 10% of patients with

sarcoidosis. Doctor Cruthirds, would you discuss the histologic findings in this patient?

DR. TERRY CRUTHIRDS: The histologic features of this case are of considerable interest, and I would like to discuss them in chronologic order.

The mediastinal lymph nodes removed in 1960 show almost complete replacement of normal lymphocyte tissue by small granulomas with considerable hyalinization but without significant necrosis. Neither acid-fast bacilli nor fungi were identified in these sections.

As previously mentioned, multiple biopsies were obtained during the present hospitalization. The axillary node, which was grossly tan and firm, on microscopic examination revealed extensive replacement of normal tissue by discrete granulomas. Again there was no necrosis. No organisms were demonstrated. The histology of the skin lesion removed from the knee was similar to the preceding, and all were of sarcoid-type reaction, as was a needle liver biopsy.

Sections from the subcutaneous nodule from the thigh were most interesting. Histologic examination revealed numerous, small, oval organisms varying somewhat in size. Many of these were found in small groups within clear spaces. Numerous organisms were demonstrated by the methenamine-silver nitrate method. These intra- and extracellular organisms were morphologically identified as *C. neoformans*. This identification was subsequently confirmed by culture of the causative agent. India ink preparations demonstrated the wide capsular halo around the central bodies.

Grossly, the lung biopsy specimen was airless and contained multiple, tiny, white foci with occasional larger areas of ill-defined black discoloration. Microscopically were seen discrete granulomas without caseation. Multinucleated giant cells were found within the granulomas, and in some of these foci there were amorphous concretions within giant cells. These Schaumann bodies, though frequently seen in sarcoidosis, are also found in other conditions.

In summary, the patient had a noncaseating granulomatous process involving lymph nodes, liver, lung, and skin. In addition to this process, there was cutaneous and subcutaneous involvement by *C. neoformans*. In view of the tissue reactions and time relationships, I interpret the whole of the tissue submitted as representative of long-standing sarcoidosis, more recently complicated by superimposed cryptococcosis.

DR. McCALL: Although this patient has had little or no pulmonary symptomatology, because of her lung infiltration she had pulmonary function tests and blood gas studies. Doctor Davis, would you discuss these?

DR. HARRY L. DAVIS: Three sets of pulmonary function data are available, and all were obtained prior to the lung biopsy and administration of steroid therapy. Ventilation data in July, 1963, was within normal limits. Repeat ventilation data in January, 1964, showed some reduction in vital capacity compared to the previous study. This suggests the presence of a mild to moderate degree of restrictive impairment, commonly observed in sarcoidosis.

Arterial blood studies performed on November 17, 1963, showed mild resting alveolar hyperventilation with normal arterial oxygen saturation at rest. However, following a standard exercise test, the oxygen saturation dropped to 90% with complete correction on breathing 100% oxygen, indicating the probable presence of impairment of diffusion.

Patients with sarcoidosis can be broadly categorized into three groups from the standpoint of their pulmonary function. The first consists of patients who have no significant impairment. These patients generally have hilar adenopathy with no, or mild involvement of the pulmonary parenchyma. The second group consists of patients who exhibit restrictive impairment of varying degrees without evidence of disturbance of air flow or intrapulmonary mixing. In the early stages these patients may have essentially normal diffusing capacity for oxygen or carbon monoxide and may have normal resting arterial oxygen saturation with either no reduction in saturation following exercise or only very mild reduction. Patients with more severe involvement exhibit the picture of the alveolar-capillary block syndrome with reduction in diffusing capacity and arterial oxygen saturation, on exercise. The present patient

falls into this second group. The third group consists of patients whose pulmonary function impairment is characteristic of that seen in obstructive emphysema.

Pulmonary function data on patients with diffuse pulmonary cryptococcosis is indeed hard to find for obvious reasons. Seldom does one see enough of these cases to develop a series, and the patients often have meningitis and therefore are too ill to undergo extensive evaluation of pulmonary function. However, I think we may safely make the assumption that these patients will probably behave in a manner similar to patients with diffuse pulmonary lesions of acid-fast or other fungi and may, on occasion, develop significant diffusion impairment. Therefore, we cannot be absolutely sure whether or not the cryptococcosis in this case is contributing to this patient's abnormal pulmonary function. Taking into consideration this patient's response to steroid therapy, however, it seems likely that most of this patient's impairment is related to the sarcoidosis.

DR. McCALL: Although I would certainly expect that disseminated cryptococcosis could cause "alveolar-capillary block," dissemination with miliary pulmonary lesions usually does not occur except terminally. For this reason, plus the rather common finding of interstitial involvement and diffusion difficulty in sarcoidosis, we also felt that this was most likely due to sarcoidosis. Her clinical and x-ray response to steroid certainly would tend to substantiate this.

In the light of the preceding we thought this patient did have sarcoidosis and subsequently developed disseminated cryptococcosis. The Chief Medical Resident, Doctor Harris, has reviewed the literature in search of patients with the co-existence of cryptococcosis and sarcoidosis. Doctor Harris, would you enlighten us on this subject?

DR. T. R. HARRIS: In evaluating this patient during this hospitalization we were interested in the relationship of the two diseases—sarcoidosis and cryptococcosis. It is well known that secondary fungus infections are often seen associated with malignancies of the reticuloendothelial system. Harrison's Textbook of Medicine states that tuberculosis and cryptococcosis are more prone to develop in patients with sarcoidosis.

The conditions which have been most frequently reported associated with cryptococcosis are Hodgkin's disease, lymphosarcoma, and leukemia. Tuberculosis, candidiasis, sarcoidosis, cirrhosis, and rheumatoid arthritis are next in frequency, and have in common the factors of chronicity and some abnormality of the RE system. Several other conditions have been reported as coexistent with cryptococcosis and include duodenal ulcer, histoplasmosis, diabetes mellitus, pregnancy, and verrucus endocarditis.

Since almost every author mentions the association of sarcoidosis and cryptococcosis we made an effort to find every case reported. We found a total of 9 with adequate information and 2 more that were mentioned briefly. The sarcoid diagnosis preceded the cryptococcal infection in all instances by varying periods of time ranging up to 5 years. After evaluation of the clinical course and the tissue diagnosis in each of these cases it was thought the diagnosis of both sarcoidosis and cryptococcosis should be made. In addition to these, there are cases in which the patient had a presumed diagnosis of sarcoidosis and subsequently proved to have cryptococcosis alone.

There are a variety of agents which in man produce lesions which are histologically indistinguishable from sarcoidosis, and include fungi, such as Cryptococcus. The production of sarcoid granuloma by such a wide variety of agents has led some workers in this field to a concept of sarcoidosis as a pattern of host tissue reaction rather than a single specific disease. Some observers believe there is both a clinical entity, sarcoidosis, and a syndrome, which may be caused by various agents in certain susceptible individuals. Because of the typical pathologic picture as described by Doctor Cruthirds, the absence of fungi or the etiologic agent in the lymph nodes removed in 1960, the clinical course and pathologic findings at present, and with the lapse of three years between the diagnosis of sarcoidosis and the findings of Cryptococcus organism, we felt this patient should be considered to have both diseases.

DR. McCALL: Because of the grave prognosis in disseminated cryptococcosis and the hazard of meningitis, it was thought that the fungus disease should be treated with amphotericin-B. We are fortunate to have in Memphis at the Kennedy Veteran's Administration Hospital an international authority on this subject, and we would appreciate any remarks that Doctor Sutliff has at this time.

DR. WHEELAN SUTLIFF: It hardly seems necessary to consider any international aspects of the speaker or the problem, because we have the very happy circumstance of the presentation of an unusual case of universal interest coupled with a display of confidence in its diagnosis, therapy, and presentation. This seems to me to be pretty much a mid-south and Memphis case and solution.

The problem presented by the presence of two diseases that produce similar clinical and pathologic results is one that requires special effort for its solution. In the case of sarcoidosis and cryptococcosis, the standards of diagnosis are entirely different. In sarcoidosis, the etiology is unknown and we rely on the course of the disease, the varied manifestations, and the demonstration of granulomatous tissue reactions on biopsy of the lesions for diagnosis. Since there are a number of etiologic agents; such as *Myobacterium tuberculosis, Histoplasma capsulatum, Cryptococcus neoformans,* and chemical agents such as beryllium, to name a few, which may produce similar clinical and histologic results, it is necessary to rule out the presence of specific etiologic agents in making a diagnosis of sarcoidosis. Cryptococcosis, on the other hand, is diagnosed primarily by recognizing the presence of *C. neoformans* and appropriate lesions associated with the consistent clinical course. There is nothing absolutely reliable about either one of these diagnostic undertakings because of the obvious opportunities for incompletely ruling out other possible causes for a sarcoid-like reaction on the one hand or, on the other hand, opportunities for over-enthusiastic interpretation of the findings of *C. neoformans* in the patient's external secretions or environment.

In the present case, the diagnosis of Boeck's sarcoid was made originally in the presence of a typical manifestation, that is, enlarged hilar lymph nodes with appropriate histologic findings and without evidence of any known etiologic agent and confirmed by the course of the disease. Subsequently skin lesions characteristic of Boeck's sarcoidosis developed, namely multiple papules about the eye and flat-top papules elsewhere which did not contain *C. neoformans* on biopsy and culture. A pulmonary lesion consistent with sarcoidosis developed which also did not contain *C. neoformans* on biopsy and culture. The presence of hyperglobulinemia, negative skin test to Mycobacterium and fungal antigens and, ultimately, response to steroid therapy were all consistent with Boeck's sarcoidosis. During the course of this disease, new and different manifestations appeared. Exudative and pustular skin lesions and progression of the pulmonary infiltration were noted and shown to be associated with the demonstration of *C. neoformans* in the sputum and in the appropriate skin lesions and adjacent lymph nodes. These manifestations and positive cultures disappeared after adequate dosage with amphotericin-B. In this completed case history the rationale and the findings are so well-adjusted that the labor involved in its management is hardly apparent. Such a demonstration involves decisions and discussion at every turn of its course to take diagnostic and therapeutic measures which bring out clearly what the demonstrable etiologic agent is and to demonstrate when its presence is significant. I feel that it is well to remark about the diligence and good judgment displayed in the study and treatment of this patient.

The presence of *C. neoformans* infection in a patient with sarcoidosis highlights the tendency of both of these diseases to be associated with other diseases. Cryptococcosis may be found in a considerable number of different chronic pulmonary and systemic diseases, the most significant of which is Hodgkin's disease and of which sarcoidosis is a constant but less frequent member. Sarcoidosis, on the other hand, is known for its tendency to co-exist with secondary infections of various causes, of which tuberculosis is the most frequent, and of which fungus diseases and occasionally cryptococcosis are a constant and re-

curring feature. I should like to quote a recent study in this regard, in which Dr. Utz and others of the National Institutes of Health reported during a discussion of opportunistic fungus infections that in a well-studied series of 34 cases of cryptococcosis, 21 of the cases had other significant systemic diseases. Four of these 34 had Hodgkin's disease and two had sarcoidosis.

The use of amphotericin-B therapy in this case and its association with the disappearance of evidence of cryptococcosis is a result which can be expected. Whereas, cryptococcosis was formerly nearly 100% fatal, amphotericin-B therapy in a recent well-described series of 30 cases seen at the National Institutes of Health resulted in 52% complete cure with one course of therapy. In some cases as little as 300 mg. was associated with complete cure, but most required intensive high dosage therapy including the use of intrathecal injections of amphotericin-B. Thirty per cent of these 30 cases, or 10, relapsed, but were retreated with satisfactory results. Only 17% of these 30 cases treated with amphotericin-B had no apparent effect from the therapy. The unfortunate result occurred in cases in which systemic disease was also present, but death in each case was not due to systemic disease, but to generalized cryptococcosis.

The occurence of cryptococcosis in this patient chronically ill with sarcoidosis brings up the question of the primary occurrence of cryptococcosis as compared to its role as an opportunistic or secondary infection in the sense of an infection occurring in persons whose inadequate immunologic defenses or generally debilitated condition make them vulnerable to the fungal infection. In our recent experience at Kennedy Hospital, *C. neoformans* organisms that were virulent for mice and, therefore presumably pathogenic, have been found more often in patients in whom no further evidence of cryptococcosis is obtained, than they have been found in cases in which obvious lesions and course of the disease are consistent with cryptococcosis. This would indicate that there is a reservoir of infection in humans and that this is present in hospitals as well as elsewhere. Demonstration of the micro-organisms in lesions and appropriate conclusions as to their significance when they are found in normal secretions or in lesions open to contamination from external sources are necessary in making the diagnosis of cryptococcosis.

DR. McCALL: Although we recognize both the rather ubiquitous occurrence of this fungus and its portal of entry through the lungs where it may cause a self-limited, mild, or even subclinical illness, it was thought that the growth of the organism not only from sputum but from skin lesions and subcutaneous abscesses established this as a disseminated cryptococcal infection with all of its hazards. Therefore, she was treated with what was considered to be an adequate course of amphotericin-B, but as noted previously she not only failed to maintain improvement but indeed worsened clinically. Since the amphotericin-B is not the drug of choice for sarcoidosis, nor should corticosteriods be given to a patient with known or even suspected Cryptococcus infection unless covered with amphotericin-B, we reached an important therapeutic dilema. After thorough search for evidence of persistent cryptococcal infection, it was thought the patient's symptomatology was due to her sarcoidosis and she was therefore started on steroid therapy. In addition to the negative histology and cultures and worsening of her clinical condition on amphotericin-B therapy, the following additional points were in favor of sarcoidosis: (1) x-ray progression, (2) increasingly abnormal liver profile, (3) persistent skin lesions, and (4) evidence of "alveolar-capillary block". We believe this judgment was subsequently proved to be correct by her clinical improvement, decrease in alkaline phosphatase, and x-ray improvement.

DR. P. MILNOR: Two questions—What do you think about the prognosis of this particular patient, and what are the indications for steroid therapy in sarcoidosis?

DR. McCALL: I think this patient's overall prognosis is pretty good. Thus far we have reason to believe that we have adequately treated her cryptococcal infection, although she will certainly have to be followed. In sarcoidosis, erythema nodosum and hilar lymph node enlargement, es-

pecially without symptoms, are said to carry favorable prognosis. This patient did begin her course with asymptomatic hilar lymphadenopathy but subsequently developed parenchymal infiltrate as well as symptoms. To further balance this favorable prognostic factor she also developed cutaneous lesions, which are associated with a relatively unfavorable prognosis. About 35% of patients with sarcoidosis recover spontaneously. About 10% die of this condition, and their course is characterized by progressive pulmonary infiltration, fibrosis, bronchiectasis secondary infections, and ultimately cor pulmonale and death. About 35% follow a chronic but non-progressive course. The majority, about 50%, with hilar lymph nodes alone or with hilar lymph nodes plus pulmonary infiltration that shows clearing within two years recover sufficiently to lead a normal life.

As to the second question regarding steroid therapy in sarcoidosis, I do not believe that steroids should be used except in those cases with progressive pulmonary involvement, uveitis, hypercalcemia, central nervous system involvement, myocardial involvement, and possibly for severe cutaneous lesions. Although not a part of your question, I think it is extremely important to emphasize that patients with sarcoidosis requiring steriod therapy should have concomitant isoniazid therapy regardless of their tuberculin skin reaction.

DR. L. W. DIGGS: What is the blood picture in sarcoidosis?

DR. McCALL: Although as in practically every aspect, sarcoidosis results in protean manifestations, these patients may have leukopenia, eosinophilia, and anemia. When the anemia is severe one should suspect and look for renal involvement. In addition, the serum calcium may be elevated, but much more important from a diagnostic standpoint, is the finding that in 60% of these patients there is an elevated gamma globulin. It should be noted that the gamma globulin may be elevated significantly even though the total globulin may be within normal limits.

DR. A. B. WEIR: I wonder if the gastroenterologists would tell us if it is possible to prevent the development of steroid ulcers with a rigid ulcer regimen.

DR. LARRY WRUBLE: I do not know of any evidence that would allow us to say that it is possible to prevent steroid ulcers even with a rigid ulcer regimen, but certainly it is not possible with anything short of this.

DR. McCALL: Although I think it is entirely possible that this patient will continue to maintain her clinical improvement, it is also possible that we will in the future be faced with the dilemma of deciding whether to place her again on steroid therapy. Obviously, should this become necessary, we would at the same time put her on a very rigid ulcer regimen.

I should like to thank those who participated in the work-up and presentation of this rather complex but fascinating patient.

CLINICOPATHOLOGIC CONFERENCE

Veterans Administration Medical Teaching Group Hospital, Memphis, Tennessee

Meningioma With Extracranial Metastases*

An unexplained peculiarity of primary intracranial tumors is the extreme rarity of remote metastasis.[1] Ependymoma is the most frequently recorded type of glioma to metastasize,[2] and a recently published case by Wisiol[3] is one of the few astrocytomas known to have metastasized. The more common intracranial tumor type which metastasizes is the meningioma. The rarity of extracranial metastases from meningiomas is reflected by the small number of reported cases. The last extensive review was made by Kruse[4] in 1960. His paper contained a table of the 22 acceptable cases, including his 2 cases. Four additional cases have since been reported.[5-8]

There have been 43 meningiomas surgically removed at this V. A. Hospital since its opening in 1946. Autopsies have been performed on 17 patients with meningiomas, 7 having had previous brain surgery at this hospital. A meningioma was an incidental finding in 3 of the autopsies.

The purpose of this paper is to present a well documented case of meningioma with histologically verified extensive extracranial metastases.

Case Report

This 48 year old white man was admitted to our V.A. Hospital in 1952 for the first of 5 admissions during an 11 year period. The patient had developed spasm and weakness of his left foot prior to admission. Ventriculogram and right cerebral angiogram indicated the presence of a mass in the right parietal area. A bilateral frontoparietal craniotomy was performed on Sept. 12, 1952 and a tumor mass with a broad attachment to the falx, sagittal sinus, and medial surface of the dura along the sagittal sinus was removed. The tumor mass measured 6 by 5 by 4 cm. An additional nodule measuring 0.5 by 0.5 by 0.5 cm. which projected into the sagittal sinus was also removed. The patient was discharged approximately 2 months following operation with a residual foot drop.

He was readmitted to the hospital in 1958 approximately 6 years following his first admission. He had done well until 4 weeks prior to admission when he developed a flaccid paralysis of the left arm. Ventriculogram indicated the presence of a tumor in the right parietal region. Parietal craniotomy was performed, and a right parasagittal tumor mass which measured 6 by 3.5 by 4 cm. was removed from its broad attachment to the sagittal sinus. It was decided to terminate the procedure because of additional tumor extending under the dura to the left. There was apparent extension again into the sagittal sinus. Ten days later a wide excision of the involved dura was performed. This included the anterior segment of the sagittal sinus which was thrombosed anteriorly by tumor. The patient was discharged 3 weeks after operation with residual weakness of his right arm and left leg. He also had developed focal seizures of his left leg which were controlled by drug therapy.

The patient was admitted to the hospital for the 3rd time Oct. 10, 1961 with right sided exopthalmos. Special Waters views of the skull showed a soft tissue mass in the right maxillary sinus. On Nov. 3, a right craniotomy was performed and a recurrent extradural mass which measured 2 by 3 by 1.5 cm. was removed which had extended into the right orbit and maxillary sinus. He did well postoperatively and was discharged 12 days after operation.

The patient was admitted to the hospital for the 4th time May 31, 1963 complaining of dizziness and of vague abdominal discomfort. A pneumoencephalogram indicated recurrent neoplasm in the right anterior cerebral hemisphere. A definite mass was palpated in the right cul-de-sac by rectal examination. Barium enema demonstrated extrinsic pressure on the cecum and ascending colon. An exploratory laparotomy was performed because of a mass in the right lower quadrant. There were numerous firm tumor nodules involving the liver, pancreas, mesenteric and retroperitoneal lymph nodes.

The patient was discharged only to return 2 months later in a comatose state. He expired 48 hours after admission with lobular pneumonia due to Klebsiella infection.

Postmortem Examination. An irregular, firm, partially encapsulated mass was embedded within the right frontal lobe, measuring 5.5 cm. in its greatest dimension and was peeled off the brain surface without difficulty. The cut surface of the tumor was grey to white in color with some brownish discoloration centrally, associated with small areas of cystic degeneration. The falx contained multiple irregular, grape-sized nodules of the same color and consistency as the large mass. (Figs. 1 and 2.)

Examination of the lungs revealed multiple pea-sized nodules diffusely throughout both lungs. The liver, pancreas, and the left adrenal cortex contained numerous tumor masses which ranged from 1 to 4 cm. in their greatest dimensions. (Fig.

---

*Presented by Francis M. Fesmire, M.D., and J. M. Young, M.D., from the Laboratory Service, Veterans Administration Medical Teaching Group Hospital, Memphis, Tenn.



FIG. 1. Transverse section of brain with recurrent meningioma.

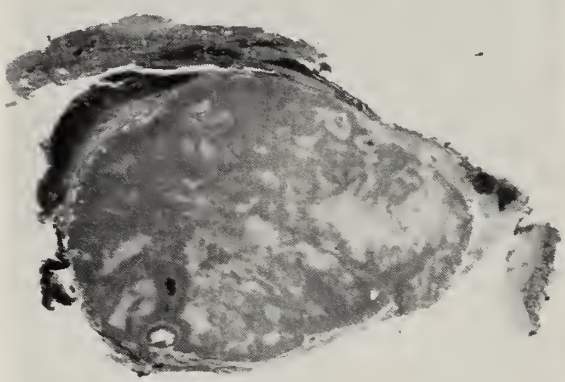


FIG. 2. Superior sagittal sinus with tumor thrombosis.

3.) Retroperitoneal lymph nodes measuring up to 7 cm. in greatest dimension were replaced by tumor. All of these tumor masses had the same color and consistency as the large intracranial mass. The neoplastic tissue removed at autopsy revealed virtually an identical histologic picture in both the intracranial and the extracranial masses. Sections of the metastatic lesions consisted of very cellular tissue composed chiefly of spindle cells with elongated nuclei arranged in interlacing bundles and whorls. Laminated structures, psammona bodies, showing hyalinization were present but none showed calcification. An occasional mitotic figure was identified. There were large areas of hyalinization. (Figs. 4 and 5.) Microscopic evidence of local extension was demonstrated only in the liver

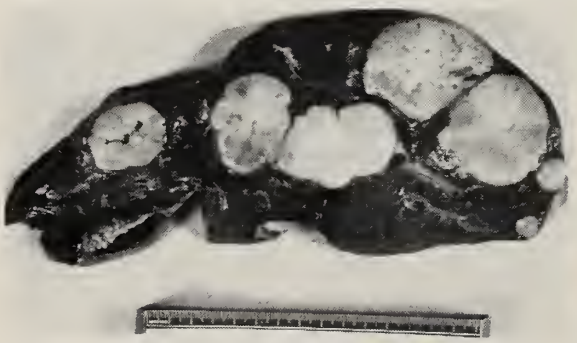


FIG. 3. Transverse section of liver with metastatic tumor.

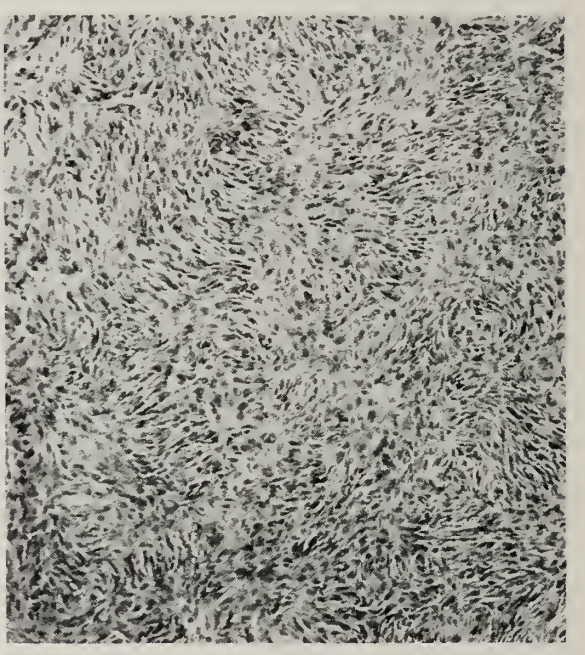


FIG. 4. Section of the meningeal tumor originally removed. Note the whorl formation.

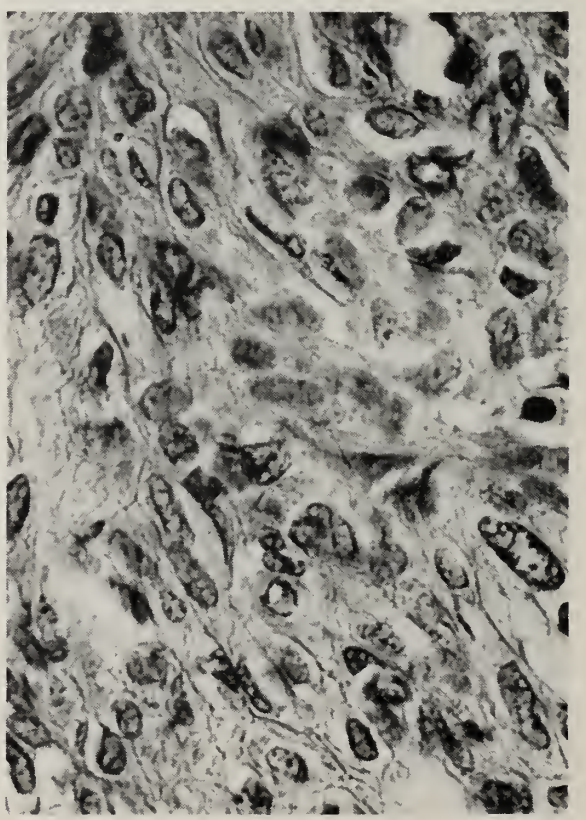


FIG. 5. High-power field of metastatic tumor showing pleomorphism.

with the remaining nodules being well encapsulated. The previous surgical material was reviewed and showed an identical histologic pattern to the tumor removed at postmortem examination. While the tumor had been classified as a *fibroblastic meningioma* in 1952, the diagnosis was changed to *meningeal sarcoma* in 1958 because of cellular pleomorphism, mitoses, invasion of the sagittal sinus, and recurrence.

Discussion

There are two reasons why this case is of particular interest. First, the extracranial metastases are perhaps more extensive than in any of the previously reported cases. Second, the route of spread in this case is readily apparent.

The reasons why only few of intracranial tumors metastasize is open to discussion. However, it is significant that there are no true lymphatic channels in the brain, and the perivascular spaces do not communicate extracranially. Invasion of the smaller veins in the brain would favor hematogenous spread of the tumor, primarily to the lungs.[9] Tissue removed however, from this patient at operation and at postmortem examination revealed no gross or microscopic demonstration of direct extension into the brain parenchyma.

The involvement of dural sinus walls is common. Simpson observed such involvement in 14% of 235 meningiomas studied.[10] Seven of the cases reported with extracranial metastases revealed evidence of tumor invading a sinus wall.[8,11-16] However, actual invasion of a dural sinus, with tumor present within the lumen of the sinus, has not been observed in any of the previously recorded cases of metastatic meningioma.[4] The first recurrence in our patient revealed occlusion of the lumen of the superior sagittal sinus with tumor. It is conjectural as to whether tumor was introduced into a dural sinus during the initial surgical procedure in 1952.

This indeed is suggested as a mechanism of initiating metastasis in many of the recorded cases.[8] However, such a possibility can be ruled out in 5 of the reported cases as no intracranial exploration was carried out prior to death.[4]

Russell[2] analyzed the reported cases of meningiomas with extracranial metastases and found that these cases yielded certain points of interest. There is no consistent histologic pattern of the meningiomas which have metastasized, though most have been of the fibroblastic type. It is not possible to predict the metastasizing potential of these tumors. There have been occasional cases in which the microscopic appearance of the primary and metastatic growths is remarkably benign. Perhaps the most significant observation is the number of recurrences with 12 of 26 reported cases having had at least two operations prior to discovery of the metastases. It is interesting that the duration of symptoms was longer than 5 years in 13 of the reported cases and greater than 10 years in 9 of the reported cases.

Summary

One case of meningioma with extracranial metastases is described. The patient developed local recurrence after 6 years with tumor thrombosis of the superior sagittal sinus. There was an additional recurrence 3 years later and this was followed by an exploratory laparotomy 2 years later which revealed the extracranial metastases. Autopsy performed 11 years after the initial operation revealed local recurrence and metastases to the lungs, liver, pancreas, left adrenal, mesenteric and retroperitoneal lymph nodes.

References

1. Kernohan, J. W. and Sayre, G. P.: Tumors of the Central Nervous System. Atlas of Tumor Pathology, Section X, Fasc. 35. Washington, D. C., Armed Forces Institute of Pathology, 1952, pages 11-12.

2. Russell, D. S. and Rubinstein, L. J.: Pathology of Tumours of the Nervous System, London. E. Arnold Ltd., 1959, pages 208-212.

3. Wisiol, E. S., Handler, S. and French, L. A.: Extracranial Metastases of a Glioblastoma Multiforme, J. Neurosurg. 19:186, 1962.

4. Kruse, Major F., Jr.: Meningeal Tumors With Extracranial Metastases, Neurology 10:197, 1960.

5. Hukill, P. B. and Lowman, R. M.: Visceral Metastasis From a Meningioma, Ann. Surg. 152: 804, 1960.

6. Meredith, J. M. and Beller, I. F.: Malignant Meningioma: Case Report of Parasagittal Meningioma of the Right Cerebral Hemisphere With Multiple Extracranial Metastases to the Vertebra, Sacrum, Ribs, Clavicle, Lungs, Liver, Left Kidney, Mediastinum and Pancreas, South. M. J. 52: 1035, 1959.

7. Robertson, B.: A Case of Meningioma With Extracranial Metastases, Acta path. et microbiol.

scandinav. 48:335, 1960.

8. Vlachos, J. and Prose, P. H.: Meningioma With Extracranial Metastases. Report of a Case, Cancer 11:439, 1958.

9. Winkleman, N. W., Cassel, C. and Schlesinger, B.: Intracranial Tumors With Extracranial Metastases, J. Neuropath. & Exper. Neurol. 11:149, 1952.

10. Simpson, D.: The Recurrence of Intracranial Meningiomas After Surgical Treatment, J. Neurol. Neurosurg. & Psychiat. 20:22, 1957.

11. Dublin, W. B.: Metastasizing Intracranial Tumors, Northwest Med. 43:83, 1944.

12. Gibbs, N. M.: Meningioma With Extracranial Metastasis, J. Path. & Bact. 76:285, 1958.

13. Jurrow, H. N.: Psammomatous Dural Endothelioma (meningioma) With Pulmonary Metastasis, Arch. Path. 32:222, 1941.

14. Ringsted, J.: Meningeal Tumors With Extracranial Metastases, With a Case Report, Acta path. et microbiol. scandinav. 43:9, 1958.

15. Rosen, H. J. and Branch, A.: Meningeal Sarcoma With Extracranial Metastasis, Canad. Serv. M. J. 10:153, 1954.

16. Swingle, A. J.: Meningosarcoma With Pulmonary Metastasis, Arch. Neurol. & Psychiat. 61: 65, 1949.

President's Page



DR. KAMPMEIER

Sitting at the window on an upper floor of a Denver hotel watching the changing colors from the rising sun playing upon the Rockies to the west . . . the foothills rose red . . . the high peaks of the Continental Divide as a back-drop, pink with last night's snowfall on the highest pinnacles. *Not in the mood to write anything!* The morning paper is pushed under the door . . . What's new . . . in the world, domestic, or just plain "Americana"?

The major party candidates still jostle each other! Herbert Hoover is buried in the Iowa village of his birth, . . . he will be remembered around the world as a great humanitarian, and at home as a sage elder statesman . . . a conservative politically, who became a millionaire after beginning work as an office boy, an orphan, at age 10. . . . One's mind drifts to other very wealthy presidents, liberals (i.e. liberal with other people's tax dollars) . . . one can't help but speculate about the motivation in those "born with a silver spoon in the mouth" . . . is it a "guilt complex" in one who has never learned the value of a dollar through honest hard work by either brawn or brains?

An oldster tells a reporter he has given up hope the "Government will stop inflation" and adds, "But at least if our medical bills are paid for we will have something to balance off against what we lose through inflation" . . . poor benighted soul, how the politicians have misled him. Another senior citizen, however, is discerning and fears "they'll bankrupt the Social Security system if medical benefits are added to it." One's thoughts wander to wishful thinking . . . if the tax-paying citizen could only be educated . . . wouldn't it be constructive if the worker had to pay all taxes, like those on his house, at one fell swoop . . . property taxes in October . . . all his Social Security tax in January . . . and half his income tax in April and again in August! Would that teach him the costs of government! Well, it wouldn't work . . . the economic base of the country would go askew if the monthly payments on the TV set, the car, the boat and the house were not paid in January, April, August, and October. If only there were some way to show up politicians and to educate simple-minded voters!

A meeting of hospital superintendents at the University of Colorado . . . Dr. Robert Myers, a director of the American College of Surgeons, is quoted as saying, "all too frequently, fads supplement reason in the proper care of the patient" . . . he inveighs against the inexcusable use of "one-unit" transfusions . . . a study by the College showed over 30% of patients received antibiotics and an estimate that 45% of those were given to prevent infections which did not exist and probably would not occur.

The foothills and the high peaks to the west are now in the full light of the risen sun . . . the paper's Ad Section has been reached . . . the coffee shop is surely open now for coffee and the trimmings.



President

THE JOURNAL

OF THE
TENNESSEE MEDICAL ASSOCIATION

Published Monthly
Devoted to the Interests of the Medical Profession of Tennessee
Office of Publication, 112 Louise Avenue, Nashville 5, Tenn.

Acceptance for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized July 15, 1932.

Copyright for protection against republication. Journals of the American Medical Association and of other state medical associations may feel free to quote from this Journal whenever they desire merely giving credit to this publication.

Address papers, discussions and scientific matter to R. H. Kampmeier, M.D., Editor, B-4211 Vanderbilt University Hospital, Nashville 12, Tennessee
Address organizational matters to Jack E. Ballentine, Executive Director, 112 Louise Avenue, Nashville 5, Tenn.

R. H. KAMPMEIER, M.D., Editor
Vanderbilt University, School of Medicine, Nashville, Tenn.

ADDISON B. SCOVILLE, JR., M.D., Assistant Editor
2104 West End Ave., Nashville, Tenn.

COMMITTEE ON SCIENTIFIC WORK AND POST GRADUATE EDUCATION
R. H. Kampmeier, M.D., Chairman
W. Powell Hutcherson, M.D., Chattanooga
Robert P. McBurney, M.D., Memphis
Eugene J. Spiotta, M.D., Memphis
(Specialty Society Representatives to be named)

NOVEMBER, 1964

EDITORIAL

THE ACHILLES REFLEX IN THYROID DISORDERS

The need for a simple and reliable thyroid function test cannot be over-emphasized. Since many extrathyroidal factors are known to modify appreciably those tests which recently have been introduced and utilized, the search for laboratory methods of evaluating thyroid function continues. In spite of the plethora of thyroid function tests currently available to the clinician, only two tests represent measurements of end-organ or tissue response to changes in thyroid function. These are the basal metabolic rate (BMR) and the serum cholesterol. Both are relatively nonspecific and subject to great error.

The slowing of reflexes has long been held in esteem by clinicians as a near pathognomonic sign in myxedema since Ord's[1] original description in 1884. The brisk reflex in thyrotoxicosis has been noted to be characteristic.[2] The recent development of several simple methods of quantitating the speed of deep tendon reflexes has prompted Nuttall and Doe[3] to evaluate one of these, the Kinemometer, in the diagnosis of thyroid disorders. These authors measured several different parts of the tracing obtained with this apparatus and attempted to correlate these changes with alterations in thyroid function. They also attempted to evaluate the specificity of the reflex changes seen in thyroid disease.

Although the Achilles, patellar and biceps reflexes have been reported to be involved most regularly and to the greatest extent in myxedema, the authors used the Achilles reflex alone in studying these patients. Measurements were made of various time intervals in evaluating the tracings obtained. Averages from the records of both legs were used and these results were compared with those obtained by other authors using different recording instruments. Nuttall and Doe found that the time interval including the last part of the contraction phase and the first part of the relaxation phase (V-P interval) was most valuable in differentiating hypothyroidism, hyperthyroidism and euthyroidism.

The normal V-P interval in males was 155 to 265 milliseconds. Patients with hyperthyroidism ranged from 100 to 150 millisec., while those with hypothyroidism had values from 285 to 780 millisec. Only 2.6% of control subjects overlapped with either form of thyroid disease. Thus, a very reliable differentiation could be established by this method. Females had a significantly slower reflex time than males.

The results of this method compared favorably with measurements of the protein bound iodine (PBI) and appeared to be superior to the I^{131} uptake in the diagnosis of thyroid disease.

An adequate recording of the Achilles tendon reflex could not be obtained in some individuals. Many of these were patients with diabetes mellitus or chronic alcoholism in whom a high incidence of peripheral neuropathy would be expected.

Administration of various drugs such as acetylsalicylic acid, epinephrine and dextroamphetamine had no effect on the Achilles tendon reflex. Cooling of the extremity with ice packs resulted in prolongation of

the reflex which was different from the changes noted in myxedema. Warming had no effect on the reflex time.

This method of measuring the Achilles tendon reflex is simple and certainly deserves further study. As presented by these authors it is a reliable method for differentiating the hypothyroid and hyperthyroid patient from the normal individual.

A. B. S.

References

1. Ord, W. M.: Address in Medicine: On Some Disorders of the Nutrition Related with Affection of the Nervous System, Brit. M. J. 2:205, 1884.

2. Werner, F. C.: The Thyroid, 2nd Edition. Harper and Row, New York, 1962, p. 639.

3. Nuttall, F. Q. and Doe, R. P.: The Achilles Reflex in Thyroid Disorders, A Critical Evaluation, Ann. Int. Med. 60:269, 1964.

DEATHS

Dr. Henry C. Roberts, 45, Memphis, died September 25th at Methodist Hospital.

Dr. W. O. Speight, 79, Memphis, died September 27th.

PROGRAMS AND NEWS OF MEDICAL SOCIETIES

Memphis-Shelby County Medical Society

The October 6th meeting of the Society was held in the auditorium of the Institute of Pathology. The program, sponsored by Kennedy VA Hospital included the following presentations: "The Use of Veins for Arterial Grafts in the Leg" by Dr. J. J. McCaughan, Jr. and "The Role of Surgery in the Treatment of Ulcerative Colitis" by Dr. Ralph F. Bowers. The scientific program was followed with the regular session of the House of Delegates.

Nashville Academy of Medicine Davidson County Medical Society

The Academy held a dinner meeting on November 10th in the Baptist Hospital Medical Auditorium. Denton A. Cooley, M.D., chief of cardiovascular surgery at Texas Children's Hospital, Houston, offered the scientific presentation entitled, "Experience with Aortic and Mitral Valve Replacement: Early and Late Results." Dr. Cooley reported on the procedure in the light of more than 250 cases.

A business session preceded the scientific program.

Chattanooga-Hamilton County Medical Society

Dr. Joseph W. Graves presented a paper entitled "Duodenal Ulcer" at the dinner meeting of the Society on November 3rd. Mr. Thomas Crutchfield, attorney, representing the Chattanooga Bar Association, was also a guest speaker. His subject was "Anatomy of a Law Suit."

NATIONAL NEWS

The Month in Washington
(From the Washington Office, AMA)

A House-Senate conference committee deadlocked over the Johnson Administration's so-called medicare proposal before adjourning to campaign for the November elections. It meant the death of such legislation for this year unless Congress should be called back in special session after the elections for further consideration of the legislation by the conference committee.

However, medicare supporters said they would revive the issue next year and make another attempt to get Congressional approval for hospitalization for the aged financed by a social security tax increase.

Failure of the committee to reach agreement on medicare also killed a cash increase in social security benefits. The House overwhelmingly voted for the cash increase. The Senate voted 49-to-44 to add an administration proposal that would have financed some hospitalization and nursing home care for the aged under social security. A majority of the House conferees—Ways and Means Committee Chairman Wilbur D. Mills (D., Ark.), Reps. John W. Byrnes (R., Wis.) and Thomas B. Curtis (R., Mo.)—stood pat against medicare. Democratic Reps. Cecil R. King (Calif.) and Hale Boggs (La.) voted for it.

Four of the seven Senate conferees voted to the last in the conference for medicare. All Democrats, they were Sens. Clinton P. Anderson (N. Mex.), George A. Smathers (Fla.), Russell B. Long (La.) and Albert Gore (Tenn.). Opposing medicare were

Finance Committee Chairman Harry F. Byrd (D., Va.) and Sens. John J. Williams (R., Del.) and Frank Carlson (R., Kan.).

The conferees from each the Senate and the House voted as a group with a majority determining how the group vote is cast. Byrnes pointed out that the pro-medicare senate conferees had denied an increase in social security cash benefits by refusing to have any bill approved if it didn't include medicare.

"Adequate cash benefits and medicare cannot both be financed through a social security tax," Byrnes said. "Adoption of the Senate amendment would make it impossible, as a practical matter, to adjust cash benefits in order to meeting increase in the cost of living. Cash benefits under social security would be 'frozen'."

Meantime, the federal-state Kerr-Mills is paying part or all of the costs of medical care, including hospitalization, for thousands of aged Americans who need such help.

Payments for medical care under the Nation's federally-aided public assistance programs neared the $1 billion mark in 1963—an increase of almost $150 million over 1962, according to recent Health, Education and Welfare Department figures.

Almost three-quarters of the total—nearly $745 million—was for medical assistance to the aged under the Kerr-Mills Old Age Assistance (OAA) and Medical Assistance for the Aged (MAA) programs. These costs alone increased by nearly $110 million over 1962.

Medical Assistance for the Aged totalled $330 million, an increase of $79 million over 1962, while medical care costs for recipients of Old Age Assistance totalled $415 million, an increase of $31 million over 1962. The MAA program covers the aged who can provide for themselves ordinarily but need help on their medical expenses. The OAA program provides medical care for the aged on public welfare rolls.

Total costs of medical care in 1963 for the needy aged, blind, disabled, and families with children totalled $964,276,000, a large percentage of which was paid for hospitalization.

The figures for 1963 showed that for the federally-aided programs:

—Hospital bills accounted for about 40 percent of the expenditures, or $384,888,000, an increase of $52 million over 1962.

—Nursing homes received $333,967,000, an increase of $62 million over 1962.

—Physicians were paid $88,942,000, increased $7 million.

—Dentists received $21,203,000, increased $3 million.

—Drug payments totalled $89,216,000, increased $12 million.

—Various other services such as optometrists, pediatrists, special medical supplies, etc. totalled $46,072,000.

Medical care for needy children and their parents accounted for $111.7 million or $15 million over 1962. Recipients of aid to the permanently and totally disabled received medical care benefits of $97.0 million in 1963, about $21 million more than 1962; and aid to the needy blind medical care reached $10.8 million, an increase of $1 million.

Expenditures under the Kerr-Mills program, which was enacted late in 1960, are running much higher now than in 1962 because more states have the program in operation and its benefits have been expanded by some of the states that were among the first to start it. Kerr-Mills MAA expenditures totalled about $36.3 million for 185,641 aged patients in July 1964.

Kerr-Mills programs were in operation by the fall of 1964, in 38 states and four other jurisdictions: Alabama, Arkansas, California, Colorado, Connecticut, Delaware, Florida, Hawaii, Idaho, Illinois, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Nebraska, New Hampshire, New Jersey, New York, North Carolina, North Dakota, Oklahome, Oregon, Pennsylvania, South Carolina, South Dakota, Tennessee, Utah, Vermont, Virginia, Washington, West Virginia, Wisconsin, Wyoming, Guam, Puerto Rico, the Virgin Islands and the District of Columbia.

Four other states—Georgia, Indiana, Mississippi and New Mexico—have authorized MAA programs. It will begin in Indiana on January 1, 1965 and is scheduled to start in Rhode Island by then.

The states themselves gave favorable re-

ports on their experiences with the Kerr-Mills program. For instance, Gov. George Romney of Michigan, one of the first states to start a Kerr-Mills program, told the Senate Finance Committee that his state "is proud of its MAA program and of our efforts to provide better medical and hospital services for our senior citizens."

Romney's letter was prompted by charges that Michigan's Kerr-Mills program is inadequate, does not reach enough people, and is too heavy a financial burden for the state. The charges were made by HEW Assistant Secretary Wilbur Cohen. Romney cited facts to show that none of Cohen's charges were justified.

To inform the public on the broad range of health care available under Kerr-Mills to aged persons unable to pay for it themselves, the American Medical Association, in cooperation with state and county medical societies, conducted a nationwide educational program.

The educational program included explanations by physicians to patients, newspaper and magazine ads, and television and radio broadcasts. Much of it coincided with Community Health Week, October 18-24.

MEDICAL NEWS IN TENNESSEE

Tennessee Valley Medical Assembly

The 12th Annual Tennessee Valley Medical Assembly convened in Chattanooga on September 28th for a two-day meeting. Most of the sessions were conducted in the Tivoli Theater. Highlight of the Assembly, sponsored by the Chattanooga-Hamilton County Medical Society was the annual banquet on Monday Evening, September 28th in the Tri-State Room at Hotel Patten. Dr. Edward H. Rynearson, senior consultant of the sections on metabolic diseases at the Mayo Clinic in Rochester, Minnesota, was banquet speaker. Dr. Rynearson, a widely known man of medicine, also has the reputation for being a most scintillatingly humorous speaker. His subject for the evening was "It's Tough to be Married to a Physician or to a Physician's Wife."

Other outstanding speakers and their subjects were:

Philip Thorek, M.D., Chicago—"Gastrointestinal Bleeding—Diagnosis and Treatment"

Joseph H. Holmes, M.D., Denver—"Treatment of Chronic Renal Disease and Renal Transplant"

Thomas J. Kirby, M.D., Rochester, Minn.—"External Diseases of the Eye"

Robert J. McHardy, M.D., New Orleans—"Critical Evaluation of Gastric Hypothermia in the Management of Duodenal Ulcer"

John C. Weed, M.D., New Orleans—"Management of Pelvic Relaxation in Women"

Richard W. Vilter, M.D., Cincinnati—"Diagnosis and Treatment of Refractory Anemias"

Frank D. Lathrop, M.D., Boston—"Management of Chronic Inflammation of the Salivary Glands"

Cornelius E. Sedgwick, M.D., Boston—"Portal Hypertension"

Robert L. Egan, M.D., Indianapolis—"Mammography in the Diagnosis of Breast Disease"

Murray M. Copeland, M.D., Houston—"The Challenge of the Biologic Aspects of Cancer of the Breast"

James G. Hughes, M.D., Memphis—"The Treatment of the Epileptic Child"

Abraham F. Lash, M.D., Chicago—"The Incompetent Internal Os of the Cervix, A Factor in Second Trimester Abortion"

Edgar F. Fincher, M.D., Atlanta—"Chronic Subdural Hematomas"

John H. Gibbon, Jr., M.D., Philadelphia—"Changing Concepts in the Therapy of Cancer of the Esophagus"

Emerson Day, M.D., New York—"Cancer Check-up in Private Practice"

William B. Kannel, M.D., Framingham, Mass.—"Factors in the Development of Clinical Atherosclerotic Disease"

Donald J. Birmingham, M.D., Cincinnati—"Occupational Diseases of the Skin"

Gerrit W. H. Schepers, M.D., Washington—"Man Made Diseases"

Physicians from eight Southern states attended the two-day meeting.

Tennessee Academy of General Practice

The 16th Annual Scientific Assembly and Congress of Delegates of the Tennessee Academy of General Practice was held in Gatlinburg, November 4-6. The scientific program included: "Dermatology in General Practice: Tumors of the Skin—Diagnosis and Treatment"—Walter F. Lever, M.D., Boston; "Pediatric Rash—Differential Diagnosis and Treatment"—Eugene F. Diamond, M.D., Chicago, and Winslow J. Bashe, Jr., M.D., Cincinnati; "Diagnosis and Treatment of Hiatal Hernia"—J. Lynwood Herrington, M.D., Nashville; "Relationship of Therapy in Pregnancy to Congenital Abnormalities"—Harry C. Shirkey, M.D., Birmingham; "The Prostate Gland"—Samuel L.

Raines, M.D., Memphis, and Reed M. Nesbit, M.D., Ann Arbor, Michigan.

A social hour, sponsored by Marion Laboratories, preceded the annual banquet at the Riverside Hotel on November 5th.

Nashville Council on Alcoholism

The Nashville Council on Alcoholism held a meeting on September 14th for the purpose of discussing plans for initiating a permanent voluntary health agency to deal with problems of alcoholism. Facts concerning the need for such an organization were presented by Joseph J. Baker, M.D., Commissioner of Mental Health, and Judge Henry Todd, chairman of the Advisory Alcoholism Commission for the State of Tennessee. Ben C. Liebermann, Jr., ACSW., Director of the State Department of Mental Health's Division on Alcoholism, outlined the state's program for treatment of alcoholics, pointing out that the Division now has one outpatient and three in-patient facilities currently serving this need. A steering committee was appointed for the purpose of selecting committees to proceed with the following objectives: (1) to establish a continuing program of education regarding alcoholism, with a wide dissemination of knowledge and information on the subject; (2) to establish an information center on alcoholism for providing both specific and general information to the public; (3) to assist agencies working in the field of alcoholism to coordinate their efforts by keeping informed of the latest developments in this field.

University of Tennessee College of Medicine

Diplomas were awarded to 65 graduates on September 20th, including 29 degrees of Doctor of Medicine. Dr. Aaron W. Christensen, assistant surgeon general, U. S. Public Health Service, was featured speaker. His topic was "The Privilege of Service." Dr. Andrew Holt, Knoxville, president of the University presented the diplomas.

★

The College's program of continuing education for physicians has received commendation from a survey team of the Council on Medical Education of the A.M.A. This program in continuing education was one of 20 in the United States selected for a pilot study in an effort to set up standards for accreditation for such courses in all the nation's medical schools.

During the fiscal year 1963-64, 17 special courses were offered, attended by 406 physicians from 32 states and Canada. The figures represent the largest number of courses and the largest attendance since the UT department was formed.

★

The Executive Committee of the UT Board of Trustees has authorized purchase of additional facilities needed to complete an addition to the UT Research Center and Hospital. The additional facilities for the $1 million clinical research addition include air conditioning equipment and other materials. President Andrew Holt said the additional facilities will place the Center in position to utilize the new addition, seeking research grants and employing the staff needed to conduct the expanded research program made possible by the addition.

★

A UT research team, aided by a $34,410 grant by the U. S. Public Health Service, will attempt to learn if there are any botulism organisms in Tennessee Valley Authority lakes. The three-year study will be directed by Dr. Frank Holtman, head of the Department of Bacteriology.

Upper Cumberland Medical Society

The 70th Annual Meeting was held at Red Boiling Springs, on June 9-10. The following program was given:

"New Methods of Arthrodesis of Foot," Dr. John R. Glover; "Ascaris Pneumonia," Dr. William M. Jackson; "Observations in Alaska Last Summer," Dr. C. C. Howard; "Carcinoma of Bile Duct and Ampulla of Vater," Dr. Robert Sadler; "Reconstruction of Severely Injured Forearm," Dr. John J. Killeffer; "Medical and Surgical Treatment of Asthma and Emphysema," Drs. James Lester, Robert McCracken, Thomas B. Haltom, and Clarence Woodcock; "Convulsive Disorders in Childhood," Dr. Dan Sanders; "Angiography in Diagnosis of Vascular Disease," Dr. Andrew Dale; "Fracture of the Fingers," Dr. Don L. Eyler; "Severed Common Hepatic Duct Due to Gunshot Wound," Dr. Joe F. Bryant; "Low Intensity Radiation Therapy for Carcinoma of Head, Neck and Pelvis," Dr. Granville Hudson; "Management of Cysts of the Pancreas," Dr. Harrison H. Shoulders, Jr.; "Treatment of Acute Leukemia in Adult," Dr.

Robert Roy; "(1) New Penicillins, (2) Treatment of Urinary Tract Infection," Drs. Andrew Spickard and Glen Koenig, and "Medical and Surgical Treatment of Aortic Valvular Disease and Heart Block," Drs. Harold Collins and Crawford W. Adams.

PERSONAL NEWS

Dr. Dan M. Thomas, Oak Ridge, is the new chairman of the Anderson County Board of Education.

Dr. John L. Armstrong, Somerville, has been accepted into fellowship by the International College of Surgeons.

Two Memphis physicians participated in the program at the joint meeting of the College of American Pathologists and the American Society of Clinical Pathologists, October 17-24 in Bal Harbour, Florida. They were: **Dr. L. W. Diggs**, chairman of the University of Tennessee's division of hematology and laboratory medicine, and **Dr. Hans N. Naumann**, chief of the biochemistry section at Kennedy Veterans Hospital.

Dr. Gordon Mathes is the new president of the Memphis Branch, Southeastern Section of the American Urological Association. He succeeds **Dr. Holt B. Maddux. Dr. Albert W. Biggs** was named president-elect and **Dr. Ralph Monger**, secretary-treasurer.

Dr. Gus Vlasis, Chattanooga, spoke on "Our Amazing Ability to Overlook the Obvious" at a Masonic meeting hosted by Chattanooga Lodge 199 on September 21st.

Dr. Calvin R. Bishop has returned to Memphis from Florida and is now in practice at 910 Madison Avenue.

Dr. Richard C. Sexton has been named to the Board of Directors of the Greater Knoxville Chamber of Commerce for a three-year term.

Dr. A. Roy Tyrer, Jr., Memphis, will serve aboard the hospital ship, S.S. Hope on its first trip to Africa. Before joining the mercy ship in Conakry, Guinea, on October 19th, he spent two weeks in Cairo, Egypt, in rehabilitation work on Parkinson's disease in conjunction with the University of Cairo's department of neurosurgery. Dr. Tyrer will return to Memphis on November 23rd.

ANNOUNCEMENTS

Calendar of Meetings, 1964-65

State

Nov. 19 —Middle Tennessee Medical Association Semiannual Meeting, Cookeville

April 11-14 —Tennessee Medical Association Annual Meeting, Read House Hotel, Chattanooga

Regional

Dec. 8-10 —Southern Surgical Association, Boca Raton Hotel, Boca Raton, Fla.

Jan. 25-27, 1965—Southern Radiological Conference, Grand Hotel, Point Clear, Ala.

March 25-27 —Mid-Central States Orthopaedic Society, Velda Rose Motel, Hot Springs, Ark.

April 22-24 —Medical Association of the State of Alabama, Birmingham, Ala.

National

Nov. 28-29 —American College of Chest Physicians (Interim Meeting), Fontainebleau Hotel, Miami Beach, Fla.

Nov. 29-Dec. 2 —American Medical Association (Clinical Meeting), Auditorium Exposition Hall, Miami Beach, Fla. and Americana Hotel, Bal Harbour, Fla.

Jan. 9-14, 1965 —American Academy of Orthopaedic Surgeons, Americana Hotel, New York (members and invited guests only)

Jan. 27-31 —Neurosurgical Society of America, The Americana Hotel, San Juan

Feb. 5-10 —Congress on Medical Education, Palmer House, Chicago

Feb. 10-13 —American College of Radiology (members only), Bellevue-Stratford Hotel, Philadelphia

Feb. 13-17 —American Academy of Allergy, Americana Hotel, Bal Harbour, Fla.

Feb. 15-17 —American College of Surgeons (sectional meeting), Bellevue-Stratford Hotel, Philadelphia

Feb. 17-21 —American College of Cardiology, Statler Hilton Hotel, Boston

Feb. 25-March 2—American Dermatological Association, Boca Raton Hotel, Boca Raton, Fla.

March 19-21 —American Society of Internal Medicine, Conrad Hilton Hotel, Chicago

March 22-26 —American College of Physicians, Chicago

March 26-27 —National Conference on Rural Health, Americana Hotel, Miami Beach, Fla.

March 29-31 —American Association for Thoracic Surgery, Roosevelt Hotel, New Orleans

April 4-8 —American College of Obstetricians and Gynecologists, Civic Auditorium, San Francisco

April 9-15 —American Academy of General Practice, San Francisco

April 25-29 —International Congress of Surgeons (North American Federation), Las Vegas, Nev.

April 26-May 1—American Academy of Neurology, Sheraton Cleveland Hotel, Cleveland

AMA Clinical Convention

The 18th Clinical Convention of the American Medical Association will be held at Miami Beach November 29-December 2. The scientific program, with the exception of the fireside conferences and roundtable discussions, will be in the Miami Beach Convention Hall. The complete program plus forms for advance registration and hotel accommodations may be found in the October 26 AMA Journal.

Second Annual Postgraduate Course

The Department of Pediatrics of the University of Cincinnati College of Medicine will give its Second Annual Postgraduate Course in Pediatrics on May 24 and 25, 1965. This course entitled "Pediatric Aspects of Surgery in Childhood" will be devoted to advances in diagnosis of pediatrics surgical problems and in the pre- and postoperative care of children. In addition to a series of lectures, the course will feature a series of informal small group sessions of 5-6 participants on related topics and recent advances in general practice. Registration will be limited to 50 physicians. The registration fee is $50.00. Address all inquiries to Dr. Wm. Schubert, The Children's Hospital, Cincinnati 29, Ohio.

Postgraduate Courses, 1965—American College of Physicians

"Stroke and the Cerebrovascular Diseases"—Rancho Los Amigos Hospital, Downey, Calif., Jan. 4-8

"Pathology, Pathologic Physiology and Clinical Aspects of Renal Disease"—Presbyterian—St. Luke's Hospital, Chicago, Feb. 15-19

"Pain and Addiction"—Harvard Medical School, Boston, Mass., Feb. 22-26

"Molecular Biology and Clinical Medicine"—Philadelphia General Hospital, Philadelphia, Pa., March 1-5

"Recent Advances in Cardiovascular Disease"—The Mount Sinai Hospital, New York, N. Y., March 8-12

"Cardiology"—Emory University School of Medicine, Atlanta, Ga., March 15-19

"Nuclear Medicine for the Internist"—The Johns Hopkins Hospital, Baltimore, Md., April 5-9

"Cardiopulmonary Diseases"—University of Colorado Medical Center, Denver, Colo., April 26-30

"Rehabilitation"—New York University Medical Center, New York, N. Y., May 10-14

"Current Concepts in Gastroenterology"—Royal Victoria Hospital, Montreal, Quebec, Canada, May 24-26

"Basic Principles in Internal Medicine"—State University of Iowa, Iowa City, Iowa, June 7-11

"The Hemodynamic Basis for Auscultation"—New York University Medical Center, New York, N. Y., June 9-11

"Psychiatry for the Internist"—University of Colorado Medical Center, Denver, Colo., June 14-18

"Hematology for Internists in the Light of Recent Developments"—University of Rochester School of Medicine, Rochester, N. Y., June 14-18

PEPTIC ULCER • FUNCTIONAL HYPERMOTILITY • IRRITABLE COLON

PYLOROSPASM • BILIARY DYSKINESIA • PANCREATITIS • URETERAL AND URINARY BLADDER SPASM • GASTRITIS



PYLOROSPASM • BILIARY DYSKINESIA • PANCREATITIS • URETERAL AND URINARY BLADDER SPASM • GASTRITIS

PRO-BANTHINE (propantheline bromide) Assures Authoritative Anticholinergic Control in Gastrointestinal Dysfunctions

The clear and consistent therapeutic benefits of Pro-Banthine (propantheline bromide) have made it the preferred anticholinergic for the past decade.

During that time, many compounds have been developed and proposed as alternatives. In the appraisal of Roach[1] ". . . few, if any, have seemed to offer a distinct improvement, . . ."

Early investigations showed that Pro-Banthine (propantheline bromide) reduces motility and acid secretion and may be used in a wide range of dosage, to bring prompt, positive anticholinergic benefits to patients with peptic ulcer, spastic colon, pylorospasm and related gastrointestinal dysfunctions.

Recent evaluations sustain these earlier judgments. In a current authoritative assessment based mainly on the factors of potency, superiority to atropine, clinical experience and physiologic study, Steinberg and Almy[2] select as the first two preferred anticholinergic drugs, methantheline [Banthine] and propantheline [Pro-Banthine].

The name Pro-Banthine (propantheline bromide) sets a stamp of therapeutic authority on any anticholinergic prescription.

Side Effects and Precautions—Urinary hesitancy, xerostomia, mydriasis and, theoretically, a curare-like action may occur. The drug is contraindicated in patients with glaucoma or severe cardiac disease.

Dosage—The usual adult dosage is one tablet of 15 mg. with meals and two at bedtime; this amount may be doubled or tripled for patients with severe conditions. Pro-Banthine (brand of propantheline bromide) is supplied as tablets of 15 mg. and, for parenteral use, as serum-type ampuls of 30 mg.

SEARLE
Chicago, Illinois 60680
Research in the Service of Medicine

1. Roach, T. C.: Therapy of Peptic Ulcer, J. Louisiana Med. Soc. *115*:136-139 (April) 1963.
2. Steinberg, H., and Almy, T. P., Drugs for Gastrointestinal Disturbances, Chapter 21, in Modell, W. (editor): Drugs of Choice —1964-1965, St. Louis, The C. V. Mosby Company, 1964, p. 343.

PEPTIC ULCER • FUNCTIONAL HYPERMOTILITY • IRRITABLE COLON

PYLOROSPASM • BILIARY DYSKINESIA • PANCREATITIS • URETERAL AND URINARY BLADDER SPASM • GASTRITIS

SAINT ALBANS

PSYCHIATRIC HOSPITAL

(A Non-Profit Organization)

Radford, Virginia

Telephone: 639-2482

STAFF

James P. King, M.D., Director

William D. Keck, M.D.
Clinical Director
James K. Morrow, M.D.
Silas R. Beatty, M.D.

Edward W. Gamble, III, M.D.
Morgan E. Scott, M.D.
J. William Giesen, M.D.
Internist (Consultant)

Clinical Psychology:
Thomas C. Camp, Ph.D.
Artie L. Sturgeon, Ph.D.

Don Phillips
Administrator

AFFILIATED CLINICS

Bluefield Mental Health Center
525 Bland St., Bluefield, W. Va.
David M. Wayne, M.D.
Phone: 325-9159

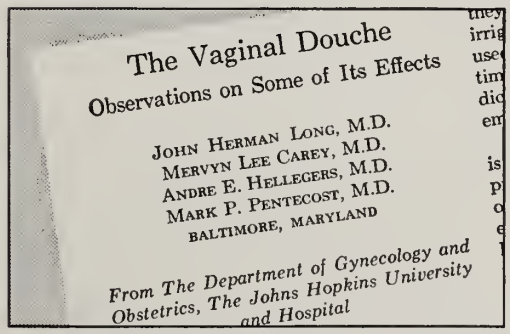
Beckley Mental Health Center
109 E. Main Street, Beckley, W. Va.
W. E. Wilkinson, M.D.
Phone: 253-8397

Charleston Mental Health Center
1206 Quarrier Street, Charleston, W. Va.
Malcolm G. MacAulay, M.D.
Phone: 344-3578

Mental Health Clinic
Professional Building, Wise, Va.
Pierce D. Nelson, M.D.
Phone: 328-2211

A Valuable Contribution To Medical Literature

A DEFINITIVE STUDY ON DOUCHING



The Vaginal Douche

Observations on Some of Its Effects

JOHN HERMAN LONG, M.D.
MERVYN LEE CAREY, M.D.
ANDRE E. HELLEGERS, M.D.
MARK P. PENTECOST, M.D.
BALTIMORE, MARYLAND

From The Department of Gynecology and Obstetrics, The Johns Hopkins University and Hospital

A SEARCH OF MEDICAL LITERATURE REVEALS NO COMPARABLE OBJECTIVE EVALUATION OF THE SUBJECT.

The authors state at the outset,

"Each physician has his own idea of the value or harm of the vaginal douche and many have expressed such ideas in writing. Such opinions have been arrived at without any intensive investigation or observation of subjects using douches as compared to those not using them. The purpose of this study is to report our observations on three groups of patients, one taking no douches, a second douching with a medicated solution* and a third douching with plain water."[1]

1. West. J. Surg., Obsts. & Gynec.: *71*:122-127, 1963

*The medicinal powder used in this study was META CINE®, a scientifically formulated preparation containing: papain, lactose, citric acid, methyl salicylate, eucalyptol, menthol and chlorothymol.

OBSERVATIONS BASED ON EXTENSIVE AND THOROUGH EXAMINATION SCHEDULE.

"One hundred patients were selected at random, regardless of their chief complaint, from the general population attending the Out-Patient Gynecology Clinic of The Johns Hopkins Hospital. Those selected were reexamined at 1, 3, 6, 9 and 12 months after the initial visit."

"At intervals patients were switched to the regimen of another group so that comparison of the effect of douching or not douching might be made in the same individual."

Three years were required to complete the study.

An evaluation of the objective findings of the study demonstrates that douching with META CINE® had the following effects on vaginal secretion:

- increased Doderlein organisms,
- proved effective in lowering WBC counts,
- proved effective in increasing glycogen content.

META CINE® was found to be a good antagonist to vaginal discharge and irritation—and also proved effective in reducing cervicitis.

No untoward effects of douching were encountered in the study.

Reprints of the complete study and professional samples of Meta Cine are available on request.

BRAYTEN PHARMACEUTICAL COMPANY • *Chattanooga 9, Tennessee*



YOU:

HISTORY: 20 years of study, plus internship/residency. Substantial investment in professional location, equipment. **SIGNS and SYMPTOMS:** Reports that large home, growing family and minimal professional standard of living are a concern. Still ahead—college costs, retirement, natural estate ambitions. **PROGNOSIS:** Needs 15-20 peak years of income to pay off education, home; rear family; retire. All this while battling tough taxes, and without the benefit of social security or company paid life and disability insurance, pension plan. **TREATMENT:** Learn about Mutual Benefit Life's "Seven Significant Benefits". Talk with a M.B.L. representative. See how a built-for-you plan solves specific problems through unique disability clauses, unusually high cash and loan values, liberal survivor income options—and more. Write on your own professional letterhead for exclusive report covering a full range of typical insurance requirements for physicians. Just ask for a copy of *Consultant's Report*.

Those who plan ahead get ahead **MUTUAL BENEFIT LIFE** INSURANCE COMPANY, NEWARK, NEW JERSEY

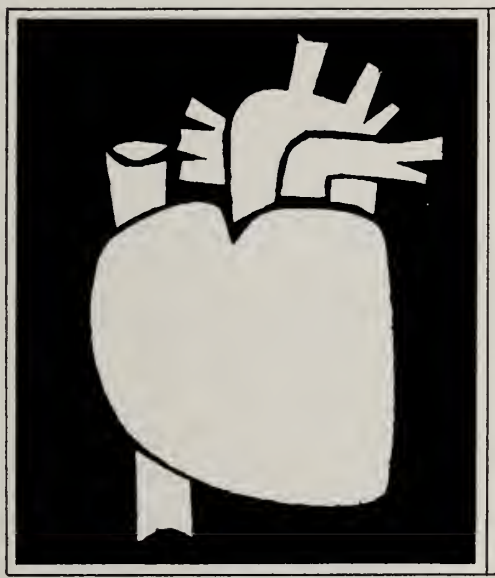
CARRIER OF YOUR TENNESSEE MEDICAL ASSOCIATION GROUP LIFE INSURANCE PLAN

EDWARD C. DUNN
1104 Sudekum Bldg.
Nashville, Tenn.

SETH W. SIZER
1211 James Bldg.
Chattanooga, Tenn.

THERON M. LEMLY
1309 Poplar Ave.
Memphis, Tenn.

A CLASSIC Rx FOR A CLASSIC DIAGNOSIS



SUDDEN ONSET
ANTERIOR
VAGUE IN CHARACTER
EFFORT
SUBSTERNAL

MILTRATE®

meprobamate 200 mg. + pentaerythritol tetranitrate 10 mg.

IN ANGINA PECTORIS AND CORONARY INSUFFICIENCY

Provides long-term coronary vasodilation[1-11, 16]

Plus long-term control of anxiety in heart disease[12-16]

REFERENCES: 1. Collicelli, A., and Nardelli, A.: Treatment of angina pectoris with a combination of pentaerythritol tetranitrate and meprobamate. Policlinico (Prat.) 67:441, Mar. 28, 1960. 2. Marche, J.: Pentaerythritol tetranitrate (pentrite or pentanitrine)—a coronary vasodilator with prolonged action. J. Med. Chir. Prat. (In French) 121:252, Nov. 1950. 3. Plotz, M.: Pentaerythritol tetranitrate: A new drug for the treatment of coronary insufficiency. N. Y. J. Med. 52:2012, Aug. 15, 1952. 4. Plotz, M.: The treatment of angina pectoris with a new prolonged action pentaerythritol tetranitrate. Amer. J. Med. Sci. 239:194, Feb. 1960. 5. Russek, H. I., Urback, K. F., Doerner, A. A. and Zohman, B. L.: Choice of a coronary vasodilator drug in clinical practice. JAMA 153:207, Sept. 19, 1953. 6. Russek, H. I., Zohman, B. L. and Dorset, V. J.: Objective evaluation of coronary vasodilator drugs. Amer. J. Med. Sci. 229:46, Jan. 1955. 7. Russek, H. I., Zohman, B. L., Drumm, A. E., Weingarten, W. and Dorset, V. J.: Long-acting coronary vasodilator drugs: Metamine, Paveril, Nitroglyn, and Peritrate. Circulation 12:169, Aug. 1955. 8. Russek, H. I.: Evaluation of drugs used in the treatment of angina pectoris by means of exercise-electrocardiographic tests. Ann. N. Y. Acad. Sci. 64:533, Nov. 16, 1956. 9. Talley, R. W., Beard, O. W., and Doherty, J. E.: Use of pentaerythritol tetranitrate (Peritrate) in treatment of angina pectoris. Amer. Heart J. 44:866, Dec. 1952. 10. Winsor, T. and Humphreys, P.: Influence of pentaerythritol tetranitrate (Peritrate) on acute and chronic coronary insufficiency. Angiol. 3:1, Feb. 1952. 11. Eskwith, I. S.: Holistic approach in the management of angina pectoris. Postgrad. Med. 27:203, Feb. 1960. 12. Friedlander, H. S.: The role of ataraxics in cardiology. J. Cardiol. 1:395, Mar. 1958. 13. Russek, H. I.: Meprobamate in the treatment of angina pectoris. Amer. J. Cardiol. 3:547, Apr. 1959. 14. Shapiro, S. Observations on the use of meprobamate in cardiovascular disorders. Angiol. 8:504, Dec. 1957. 15. Waldman, S. and Pelner, L.: Modification of the anxiety state associated with myocardial infarction by meprobamate: preliminary notes. N. Y. J. Med. 58:1285, Apr. 15, 1958. 16. Koehnke, F. K.: Treatment of angina pectoris of functional origin with Corneural. Med. Klin. 54:1435, Aug. 1959.

Indications: 'Miltrate' is useful for prophylaxis of pain in angina pectoris and coronary insufficiency, especially where anxiety is a factor. **Contraindications:** Like all nitrates, pentaerythritol tetranitrate should be avoided or prescribed cautiously for patients with glaucoma. Previous allergic or idiosyncratic reactions to meprobamate contraindicate subsequent use. **Precautions:** *Meprobamate* — Patients engaged in activities requiring alertness should be warned of drowsiness. Meprobamate may increase the effects of excessive alcohol, and the possibility of dependence should be considered, particularly in patients with a history of drug or alcohol addiction. Sudden withdrawal may result in reactions, rarely epileptiform seizures. Grand mal attacks may be precipitated in persons susceptible to both grand and petit mal. Prescribe cautiously and in small quantities to patients with suicidal tendencies. **Side effects:** *Pentaerythritol tetranitrate* — The most common side effects are transient headache, nausea, and rash. Weakness, palpitation, flushing, gastrointestinal distress, and lightheadedness have been reported on a few occasions. *Meprobamate* — May cause drowsiness and, rarely, ataxia, usually controlled by decreasing the dosage. Allergic or idiosyncratic reactions are rare, generally developing after one to four doses of the drug. Mild reactions include urticarial or maculopapular rash. Serious reactions, rarely encountered, include dermatological effects, acute nonthrombocytopenic purpura, chills, fever, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises, anuria, anaphylaxis, stomatitis and proctitis. Treatment should be symptomatic, and the drug not be reinstituted. **Dosage:** Usual dosage is one or two tablets before meals and at bedtime. Individualization of dosage is required for maximum therapeutic effect. Doses above twelve tablets daily are not recommended. **Supplied:** White tablets, each containing meprobamate 200 mg. and pentaerythritol tetranitrate 10 mg. ***Before prescribing, consult package circular.***

WALLACE LABORATORIES / Cranbury, N. J.

CML-4055

Give Now . . .

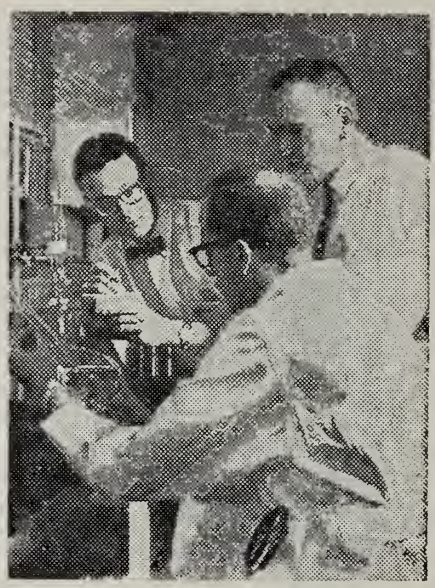
to your

medical student

loan fund

Help deserving

young Tennesseans!



Tennessee Medical Association Student Education Fund

112 Louise Avenue, Nashville, Tennessee 37203

Sponsored by the Tennessee Medical Association



A SURGICAL INSTRUMENT OIL

Scientifically Developed for the

MEDICAL PROFESSION

Apply as indicated; a few drops especially in locks and serrations of instruments, or other delicate mechanisms. Leave a thin film over the entire instrument to prevent rust in disuse or storage. This highly refined clear instrument oil will not clog, gum or turn rancid. Non-corrosive.

4-oz. can 75c

Pt. bottle with dispensing can $2.50

Qt. bottle with dispensing can $4.00

Plus post.

White Surgical Supply Co.

SURGICAL SUPPLIES & ACCESSORIES

515 West Church Ave. Knoxville 7, Tennessee

Telephone 3-1186

Murfreesboro—Vacancies

STAFF PHYSICIAN for 1275 bed Neuropsychiatric Hospital, including 350 general medical and geriatric. Modern facilities for diagnosis and treatment of mental illness. Salary $12,075 to $21,590 depending on qualifications; fringe benefits; cost of moving to Murfreesboro will be paid by Veterans Administration; visit here for evaluation can be arranged at our expense. Excellent educational opportunities for students in this area. Contact Director, Veterans Administration Hospital, Murfreesboro, Tennessee.



After Surgery: B and C vitamins are therapy

Therapeutic amounts of B and C in stress formula vitamins often are vital during periods of physiologic stress. STRESSCAPS, designed to meet increased metabolic demands, aids in achieving a more comfortable convalescence, a more rapid recovery. After surgery, as in many stress conditions, STRESSCAPS vitamins are therapy.

Each capsule contains:

Vitamin B_1 (Thiamine Mononitrate)	10 mg.
Vitamin B_2 (Riboflavin)	10 mg.
Niacinamide	100 mg.
Vitamin C (Ascorbic Acid)	300 mg.
Vitamin B_6 (Pyridoxine HCl)	2 mg.
Vitamin B_{12} Crystalline	4 mcgm.
Calcium Pantothenate	20 mg.

Recommended intake: Adults, 1 capsule daily, for the treatment of vitamin deficiencies. Supplied in decorative "reminder" jars of 30 and 100; bottles of 500.

STRESSCAPS®

Stress Formula Vitamins Lederle

FOR PROFESSIONAL RECOMMENDATION ONLY

Lederle LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, N. Y.

7282-4

Tennessee Medical Association's

Exclusively Approved

GROUP DISABILITY INCOME PROGRAM

Administered By

Smith, Reed, Thompson & Ellis Co.

1322 Nashville Trust Building
NASHVILLE 3, TENNESSEE
Phone 255-7625

WILLIAM H. ELLIS, C. L. U. MGR.
THOMAS G. HENRY

ASSOCIATES

Alden H. Smith, C. L. U.

Arthur D. Reed, C. L. U.

Joe Thompson, Jr., C. L. U.

Alden H. Smith, Jr., C. L. U.

E. Dan Smith, II

Underwritten By

Commercial Insurance Company

Newark, New Jersey

This is the season Allbee® with C is made for!



When a good old-fashioned winter proves too much for your modern-day patients, it's a comfort to know about Allbee with C. Consider its simple, rational, economical formula when patients need therapeutic amounts of B and C vitamins during the "flu" and u.r.i. season. **This is what Allbee with C is made of:** Thiamine mononitrate (B_1), 15 mg.; Riboflavin (B_2), 10 mg.; Pyridoxine HCl (B_6), 5 mg.; Nicotinamide, 50 mg.; Calcium pantothenate, 10 mg.; Ascorbic acid (vitamin C), 300 mg.

A. H. Robins, Co., Inc. Richmond 20, Va.


ALL THE YEAR ROUND
CHARLES DICKENS
VIXEN

for patients who cough like the dickens... Great Expectorants by A. H. Robins

Back in Dickens' day, about the only remedy they had for a bad cough was time—and an occasional sip of rock-and-rye. Nowadays however, when dealing with bronchitis, croup, and URI, you can prescribe with "great expectations" of success by choosing one of Robins' great expectorants.

Although each Robins' antitussive is formulated for a cougher's special need, all contain glyceryl guaiacolate, a superior expectorant that produces significant increases in respiratory tract fluid (RTF) secretions.* By stimulating the natural production of RTF, glyceryl guaiacolate makes fewer coughs more productive so that the cough itself removes the very irritants that cause it.

After millions of prescriptions, no significant side effects have ever been reported from glyceryl guaiacolate. And acceptance of these elegant and highly palatable formulations by patients has always been outstanding. Whenever you treat patients who are coughing "like the dickens," give them relief with one of Robins' great expectorants.

A. H. Robins Company, Inc. Richmond, Va. 23220

ROBITUSSIN®

antitussive / demulcent / expectorant

Each 5 cc. (1 tsp.) contains:

Glyceryl guaiacolate	100 mg.

Alcohol 3.5 per cent

ROBITUSSIN® A-C (exempt narcotic)

Robitussin with antihistamine and codeine

Each 5 cc. (1 tsp.) contains:

Glyceryl guaiacolate	100 mg.
Pheniramine maleate	7.5 mg.
Codeine phosphate	10.0 mg.

(Warning: may be habit forming)

Alcohol 3.5 per cent

Robitussin is indicated in coughs associated with head and chest colds, bronchitis, laryngitis, tracheitis, pharyngitis, pertussis, "flu," "grippe," measles, chronic paranasal sinusitis, pulmonary tuberculosis, or smoking. Robitussin A-C is especially indicated for allergic, harsh or unresponsive coughs.

dosage: ADULTS—1 tsp. every 3 to 4 hours. CHILDREN—½ tsp. every 3 to 4 hours.

side effects: No serious side effects from glyceryl guaiacolate have ever been reported. Nausea, G-I upset, and drowsiness may be encountered rarely with Robitussin A-C.

precautions: There are no contraindications for Robitussin. Robitussin A-C is contraindicated in patients hypersensitive to antihistamines or codeine.

DIMETANE® EXPECTORANT

antihistaminic / antitussive

Each 5 cc. (1 tsp.) contains:

Dimetane® (brompheniramine maleate)	2 mg.
Phenylephrine hydrochloride	5 mg.
Phenylpropanolamine hydrochloride	5 mg.
Glyceryl guaiacolate	100 mg.

Alcohol 3.5 per cent in a palatable, aromatic base.

DIMETANE® EXPECTORANT-DC

(exempt narcotic)

antihistaminic / antitussive / suppressant

Codeine phosphate	10 mg.

(Warning: may be habit forming)

Dimetane® (brompheniramine maleate)	2 mg.
Phenylephrine hydrochloride	5 mg.
Phenylpropanolamine hydrochloride	5 mg.
Glyceryl guaiacolate	100 mg.

Alcohol 3.5 per cent in a palatable, aromatic base.

Indicated for relief of cough and allergic states in which an expectorant action is useful. Dimetane Expectorant-DC is indicated when the cough suppressant action of codeine is desired.

dosage: ADULTS—1 to 2 tsp. q.i.d., as necessary. CHILDREN—½ to 1 tsp., t.i.d. or q.i.d.

side effects: Overdosage may result in mild drowsiness or excitement, but within the therapeutic range neither is likely.

Precautions: Administer with caution to patients with cardiac or peripheral vascular diseases and hypertension.

contraindications: Hypersensitivity to antihistamines or codeine. Not recommended for use during pregnancy.

references:* Boyd, E. M., and Ronan, A. K.: Am. J. Physiol., 135:383, 1942.

Nashville Surgical Supply Company

The Physician and Hospital's Complete Supply & Service Source

Physicians equipment and supplies

Hospital equipment and supplies

Laboratory equipment and supplies

THE MOST COMPLETE DRUG AND BIOLOGICAL SUPPLY SOURCE IN TENNESSEE

Distributor for Standard and Mattern X-Ray Equipment and Supplies

24-Hour Emergency Service

Nashville Surgical Supply Co., Incorporated

1911 Church St.

Nashville, Tennessee

Phone AL 5-4601



Doctor, you can take it with you!



THE BURDICK EK-III **DUAL-SPEED ELECTROCARDIOGRAPH**

- 26½ pounds light, including all accessories and carrying case! Ideal for office or bedside use
- 25 or 50 mm. speed — an accurate record for an accurate diagnosis
- frequency response greatly in excess of minimum A.M.A. standards
- top-loading paper drive eliminates tedious paper-threading adjustments

Burdick

THE BURDICK CORPORATION
MILTON, WISCONSIN
Branch Offices: New York • Chicago • Atlanta • Los Angeles
Dealers in all principal cities
KAY SURGICAL, INC.
1144 Madison Ave. Memphis, Tenn.

Today's Health
PUBLISHED BY THE American Medical Association
FOR THE AMERICAN FAMILY

A Good Buy in Public Relations

★ Place it in your reception room

Today's Health is published for the American Family by the American Medical Association, 535 N. Dearborn St.—Chicago 10, Illinois

Give your subscription order to a member of your local Medical Society Woman's Auxiliary, who can give you Special Reduced Rates.

Wanted:
Male Psychiatrist

Opening for a Board Eligible or Board Certified Psychiatrist to Join a well-established group.

Ideal work conditions in a 145-bed active treatment hospital serving several Southeastern states.

Professional freedom. Good living conditions.

Starting salary—$20,000-25,000

For Full Particulars Write Box 300 This Journal

REFER EYE PATIENTS
TO AN
EYE PHYSICIAN

By so doing, you will be assured of a complete diagnosis of your patients' eyes.

Guild Opticians complete the cycle for Professional Service.

GUILD OF PRESCRIPTION OPTICIANS OF AMERICA

BE SAFE—BE SURE

SEE

YOUR GUILD OPTICIAN

FOR

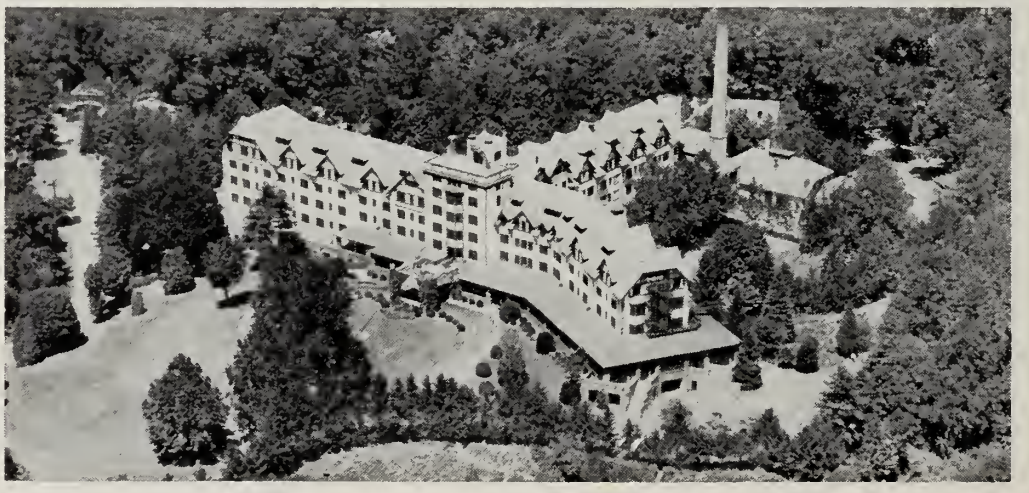
THE BEST SERVICE

EYE PHYSICIANS: Please Note—

Your prescriptions for glasses are "SAFE" when referred to a Guild Optician. Bound by the code of Ethics to uphold the highest standards in optical service.

APPALACHIAN HALL
Established 1916

Asheville North Carolina



An Institution for the diagnosis and treatment of Psychiatric and Neurological illnesses, rest, convalescence, drug and alcohol habituation.
Insulin Coma, Electroshock and Psychotherapy are employed. The Institution is equipped with complete laboratory facilities including electroencephalography and X-ray.
Appalachian Hall is located in Asheville, North Carolina, a resort town, which justly claims an all around climate for health and comfort. There are ample facilities for classification of patients, rooms single or en suite.

WM. RAY GRIFFIN, JR., M.D. MARK A. GRIFFIN, SR., M.D.
ROBERT A. GRIFFIN, M.D. MARK A. GRIFFIN, JR., M.D.

For rates and further information write
Appalachian Hall, Asheville, N. C.

PLACEMENT SERVICE

The Placement Service of the Tennessee Medical Association is designed to assist both doctors and communities. Further information and contacts, to both physicians and communities, is available from the Public Service Office, 112 Louise Avenue, Nashville, Tennessee—telephone 291-4584.

Locations Wanted

GENERAL SURGEON, with sub-specialty in endocrinology, 31 years of age, graduate of the University of Tennessee, would like assistant, associate or solo practice in any city in Tennessee. Married; Baptist; Board certified. Available with two weeks notice. LW-497

◆

INTERNIST, with sub-specialty in endocrinology, age 29, now in residency, would like any type practice in Middle or West Tennessee area with 25,000 plus population. Graduate University of Tennessee College of Medicine. Single; Methodist. Available November 1, 1964. LW-511

◆

INTERNIST, with practice in hematology-cardiology, graduate of New York University School of Medicine, would like associate, clinical or institutional practice in Middle or West Tennessee city of 25,000 plus population. 38 years of age; married; Lutheran; Board eligible. Available within three months. LW-520

◆

SURGEON, general and thoracic, 38 years of age, graduate of the University of Tennessee College of Medicine, would like associate, institutional or solo practice in East or Middle Tennessee city of 20,000 plus. Now in residency. Married; Catholic. Available within 2 weeks. LW-525

◆

GENERAL SURGEON, age 30, graduate University of Chicago School of Medicine, presently in military service, would like assistant or associate practice in Middle or West Tennessee city of 50,000 plus. Tennessee license; American College of Surgeons; Jewish; married. Available within one month. LW-529

◆

INTERNIST, age 34, graduate of the Harvard Medical School, would like assistant, associate or clinical practice in any location in Tennessee of 25,000 population plus. Now in private practice. Married. Methodist. Available upon notice. LW-531

◆

PEDIATRICIAN, age 31, graduate of the University of Arkansas, Board eligible, would like associate or clinical practice in any location of Tennessee. Now on active duty with U. S. Navy. Married. Jewish. Available July 1965. LW-532

◆

OBSTETRICIAN-GYNECOLOGIST, age 33, graduate of the University of Alabama School of Medicine, would like associate practice in any size town in East or Middle Tennessee. Married. Protestant. Jr. Fellow, American College OB-GYN. Available July 1, 1965. LW-549

◆

GENERAL PRACTITIONER, 35 years of age, graduate of the University of Louisville School of Medicine, would like to re-locate in any size city in Tennessee, in associate, clinical or industrial practice. Married. Methodist. Available immediately. LW-550

GENERAL PRACTITIONER, 63 years of age, graduate of Vanderbilt University School of Medicine would like clinical or industrial practice in Middle Tennessee. Single; protestant. Available immediately. LW-551

Physicians Wanted

GENERAL PRACTITIONER, as associate, wanted in East Tennessee community of 6,000. Age 25-35, with one year internship. New, private office; examining rooms and equipment available. Hospital located in community. PW-134

◆

PEDIATRICIAN, with two years internship and one year residency, needed in Middle Tennessee town of 5,000. Office space available near hospital. PW-137

◆

GENERAL PRACTITIONER needed in East Tennessee town of over 800; hospital located in town. Office space and equipment available. Associate or assistant status. PW-192

◆

ASSISTANT GENERAL PRACTITIONER, with experience in Ob-Gyn and/or surgery, needed in Middle Tennessee town of 12,000. Eighteen bed hospital-clinic building. Will furnish office space, utilities and equipment. Age 30-35; with high morals. PW-200

◆

INDUSTRIAL PHYSICIAN, 25-40 years of age, needed by large concern in East Tennessee city of 180,000. Office space and equipment provided. Regular office hours. Will assist in obtaining housing if desired. Salary and many fringe benefits. Excellent opportunity. PW-206

◆

RADIOLOGIST needed for hospital of 100 beds located in Northwest town of 10,000. One year internship and three years residency. Lake recreational facilities nearby. Good housing and schools. PW-209

◆

INTERNIST or GENERAL PRACTITIONER to be associated with clinic group needed in Middle Tennessee town of 12,000, located near major metropolitan area. Clinic adjoining general hospital. PW-211

◆

INTERNIST, as associate, needed in Middle Tennessee town of 35,000 plus. Office space available. 175 bed hospital, well equipped, located in town. Only 40 minutes from large recreational water facilities. Current physicians enjoy congenial association. PW-214

◆

ASSOCIATE in general practice with a group in Middle Tennessee is needed. Excellent clinic and hospital facilities. Starting salary $1,500.00 per month. PW-216

◆

PHYSICIAN WANTED: Internist or general practitioner in his thirties or late twenties to join full time the Medical Department of large life insurance company in metropolitan community. PW-218

NEEDED
GENERAL PHYSICIAN

Family Internist by four man group in growing rural program in West Virginia. Modern Clinic facilities, regularly visiting specialist consultant staff, scheduled training and vacation periods, foundation sponsorship, no investment required. Starting net income range $14,000-$18,000 depending on qualifications.

For Full Particulars Write Box 700 This Journal

Remember, Doctor—

It's been

Tafel Surgical Supply Co., Inc.

SINCE 1889

for

Drugs, Orthopedic, Surgical

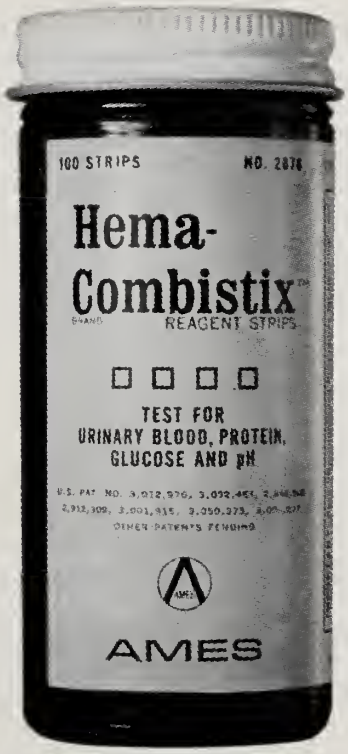
Supplies & Equipment

1203 Church Street

Nashville, Tennessee

List of Advertisers in This Issue

American Cyanamid Company	III, XVI, XX, XXIV, XXV, XXXVII
American Tobacco Co., The	XXIII
Ames Co., Inc.	XLIX
Appalachian Hall	XLVI
Baker Laboratories	XXVII
Brayten Pharmaceutical Co.	X, XXXIII
Burroughs Wellcome & Co.	IX
Coca-Cola	XLIV
Farringer & Company	XLV
Geigy Pharmaceuticals	VIII
Glennbrook Laboratories	XXVIII
Guild Opticians	XLVI
Hill Crest Sanitarium	XLIV
Kay Surgical, Inc.	XLIII
Lilly, Eli and Co.	I, XXX
Mutual Benefit Life Ins. Co.	XXXIV
Nashville Surgical Supply Co., Inc.	XLII
Parke-Davis and Company	II
Pfizer Laboratories	XV, XVII, XVIII, XIX
Physician, General	XLVIII
Placement Service	XLVII
Poythress, William F. & Company	XXIX
Procter & Gamble	Insert
Psychiatrist Wanted	XLIII
Robins, A. H. Co.	Insert, XIII, Insert
Roche Laboratories	L
St. Albans	XXXII
Searle, G. D. & Co.	XXXI
Smith, Kline & French Laboratories	XIV
Smith, Reed, Thompson & Ellis Co.	XXXVIII
Tafel Surgical Supply Co., Inc.	XLVIII
TMA Student Education Fund	XXXVI
Todays Health	XLIII
VA Hospital, Murfreesboro	XXXVI
Wallace Laboratories	VI, VII, XXVI, XXXV
White Surgical Supply Co.	XXXVI
Winthrop Laboratories	V





Once you have used **HEMA-COMBISTIX,**[T.M.] dip-and-read test for urinary blood, protein, glucose, and pH, it may become a habit to test every patient's urine routinely with this simple, convenient reagent strip. Most of the answers will be "negatives," but an unexpected "positive" may alert you to serious pathology even before related symptoms appear. The test takes only 60 seconds. As basic as the stethoscope...**HEMA-COMBISTIX** is a *good* habit to form. □ Ames Company, Inc., Elkhart, Indiana. 68764

AMES
AMES



for
The Age of
Anxiety

In prescribing: Dosage—Adults: Mild to moderate anxiety and tension, 5 or 10 mg t.i.d. or q.i.d.; severe states, 20 or 25 mg t.i.d. or q.i.d. Geriatric patients: 5 mg b.i.d. to q.i.d.

Cautions—Occasional side effects, often dose-related, are drowsiness, ataxia, minor skin rashes, menstrual irregularities, nausea and constipation. Paradoxical reactions may occasionally occur in psychiatric patients. Individual maintenance dosages should be determined. Advise patients against possibly hazardous procedures until maintenance dosage is established. Though compatible with most drugs, use care in combining with other psychotropics, particularly MAO inhibitors or phenothiazines; warn patients of possible combined effects with alcohol. Observe usual precautions in impaired renal or hepatic function, and in long-term treatment.

Supplied—Capsules, 5 mg, 10 mg and 25 mg, bottles of 50 and 500.

ROCHE

LIBRIUM®
(chlordiazepoxide HCl)

Roche Laboratories, Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110

1-5-65

THE JOURNAL OF THE TENNESSEE MEDICAL ASSOCIATION

LIBRARY OF THE RHODE ISLAND MEDICAL SOCIETY

TENNESSEE MEDICAL ASSOCIATION
130th Annual Meeting
Read House, Chattanooga, Tennessee
April 11-13, 1965

DECEMBER, 1964

Volume 57 Number 12

le of Contents on Page IV
to Advertisers on
XXXVIII

AMYTAL TAKES THE EDGE OFF DAYTIME ANXIETY AND TENSION

Amytal is a moderately long-acting barbiturate that takes the edge off daytime anxiety and tension without significant change in mood and attitude. Since Amytal is metabolized in the liver within twenty-eight hours, overlapping of effect is minimized, and renal damage does not constitute an absolute contraindication.

Side-Effects: Idiosyncrasy or allergic reactions to the barbiturates may occur.

Precautions and Contraindications: Amytal should be used with caution in patients with decreased liver function, since a prolongation of effect may occur. Administration in the presence of uncontrolled pain may produce excitement. Warning—May be habit-forming.

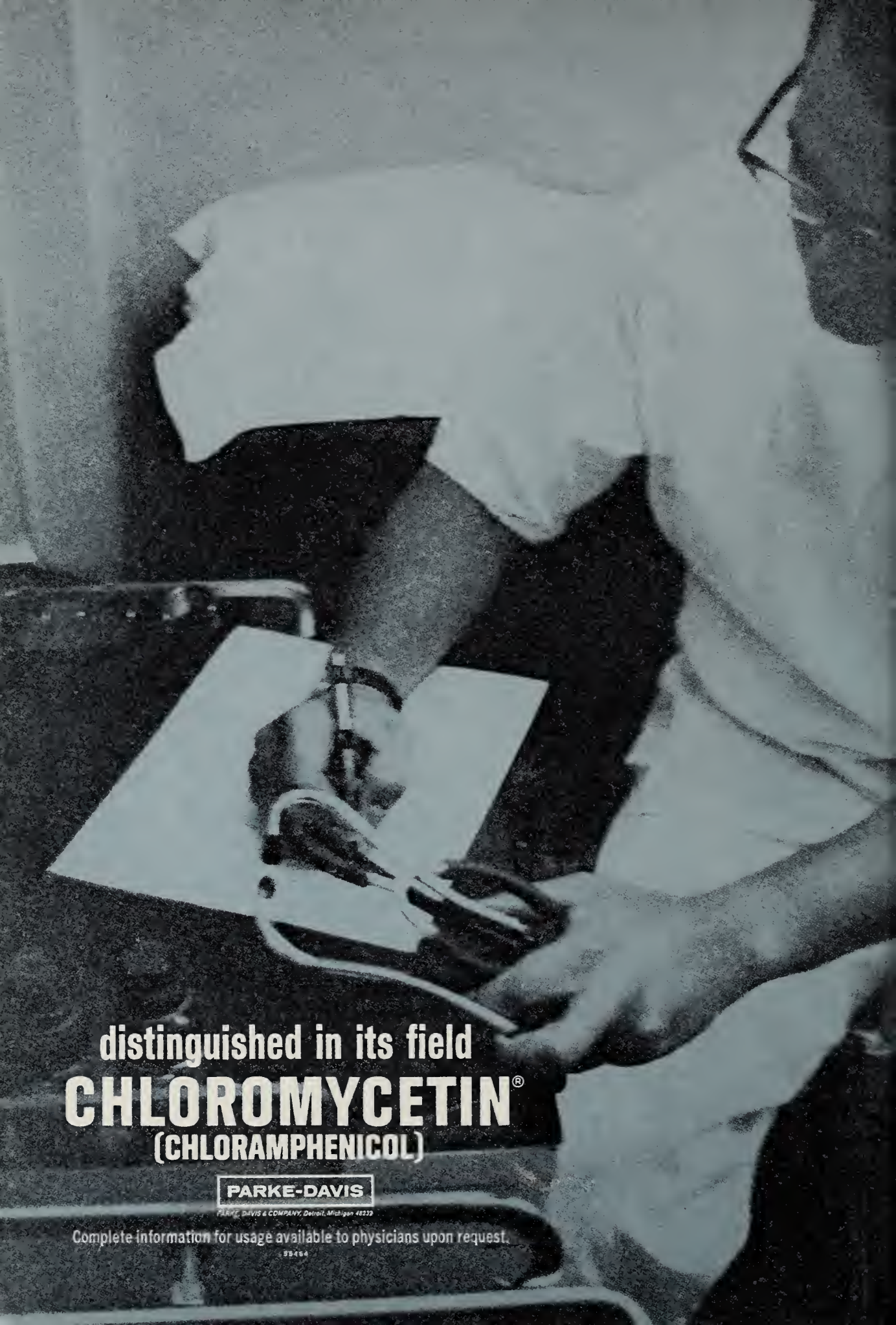
Dosage: Doses should be individualized for each patient. The usual adult sedative dosage ranges from 30 mg. (1/2 grain) to 50 mg. (3/4 grain) two or three times daily.

Additional information available to physicians upon request. Eli Lilly and Company, Indianapolis 6, Indiana.

AMYTAL®
AMOBARBITAL

Lilly

401174


distinguished in its field
CHLOROMYCETIN®
(CHLORAMPHENICOL)
PARKE-DAVIS
PARKE, DAVIS & COMPANY, Detroit, Michigan 48232
Complete information for usage available to physicians upon request.
58464

Announcing . . . the Second Volume in the New Series from SAUNDERS

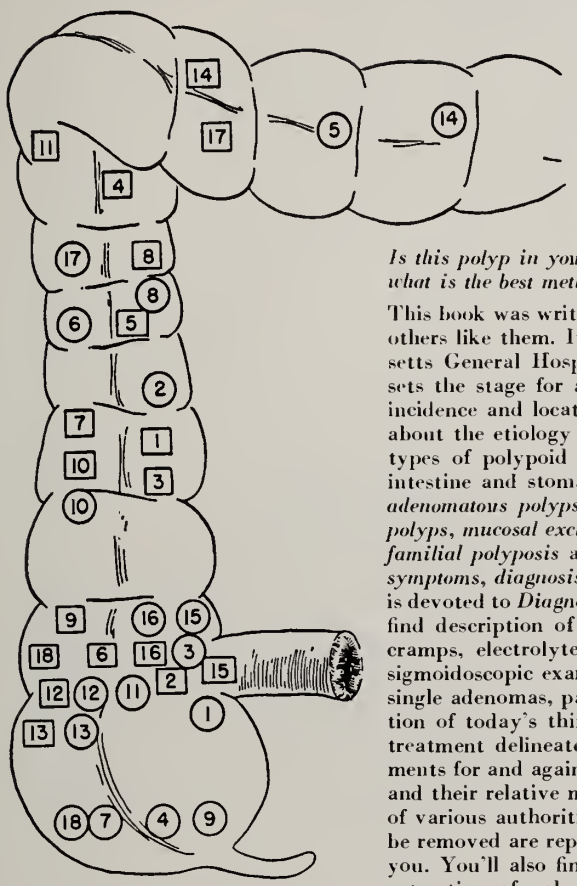


Figure 3-25. *Location of cancer and simple adenomas in resected cancers of the right colon. Squares locate cancers; circles, adenomas.*

Polypoid Lesions of the Gastrointestinal Tract

by Claude E. Welch, M.D.

Is this polyp in your patient benign or malignant? Should it be removed? If so, what is the best method for this particular lesion in this particular patient?

This book was written to help you answer questions such as those above, and others like them. Its author has drawn on the experience of 1124 Massachusetts General Hospital patients, plus many personal cases. Dr. Welch first sets the stage for a fruitful discussion by defining terms, by discussing the incidence and location of polypoid tumors, and summarizing what is known about the etiology of adenomas. He then proceeds to illuminate the various types of polypoid lesions you'll encounter in the colon and rectum, small intestine and stomach. He describes and illustrates common lesions such as *adenomatous polyps* and *papillary adenomas*, and such rare ones as *pseudopolyps, mucosal excrescences, Peutz-Jeghers polyps*, etc. *Multiple polyposis* and *familial polyposis* are also completely covered. *Etiology, incidence, pathology, symptoms, diagnosis, prognosis, treatment*, are clearly set forth. A full chapter is devoted to *Diagnosis of Polypoid Lesions of the Colon and Rectum*. Here you'll find description of symptoms (bleeding, change in bowel habit, abdominal cramps, electrolyte imbalance, etc.) and physical findings from palpation, sigmoidoscopic examination, and radiologic examination. The relationship of single adenomas, papillary adenomas, and cancer is discussed, with examination of today's thinking on the adenoma-cancer relationship. A chapter on treatment delineates location and identification of polyps, giving you arguments for and against their removal. Polypectomy and resection are discussed and their relative merits contrasted. If resection is decided upon, the opinion of various authorities as to the amount of bowel and mesentery that should be removed are reported. The author states his own conclusions to help guide you. You'll also find helpful consideration of sub-total and total colectomy, extraction of polyps via the anus, posterior proctotomy, resection of the rectum, and sigmoidoscopic removal of polyps.

By Claude E. Welch, M.D., Visiting Surgeon, Massachusetts General Hospital, Boston; and Clinical Professor of Surgery, Harvard Medical School, Boston. 148 pages, 6⅛" x 9¼", illustrated. $7.50. *New—Just Ready!*

About this New Series: MAJOR PROBLEMS IN CLINICAL SURGERY

J. Englebert Dunphy, M.D., Consulting Editor

Each volume in this series will exhaustively illuminate a significant and pressing problem met in surgical practice by the clinical surgeon. These monographs aim to fill the vital gap left between standard textbooks of surgery and relevant journals. Held to a consistently graduate level of presentation, they give rock-solid accounts and analysis of precisely what can be done today in managing knotty surgical problems. Each eminently qualified specialist-author will present a critical analysis of changing approaches to therapy, of etiology, pathologic physiology, diagnosis and differential diagnosis. Where operative techniques figure importantly in the problem, they will be clearly described and fully illustrated in abundant detail. Operative and postoperative complications, results and prognosis will be carefully considered; areas of conflict in theory and hypothesis fully explored. The authors' own evaluations, opinions and conclusions will be expressed and substantiated. Several volumes will appear each year, containing between 150-300 generously illustrated pages.

Child—*The Liver and Portal Hypertension*, was the first volume in this series, published June, 1964. Future volumes are scheduled to cover: *Trauma to the Liver—Surgical Problems of the Pancreas—Peripheral Arterial Disease.*

Why not subscribe to the entire series on an automatic, full return privilege basis? You need merely check the proper square below to see each one of the series on examination. Sent postpaid.

W. B. SAUNDERS COMPANY
West Washington Square, Phila., Pa. 19105

Please send and bill me:

☐ Welch—*Polypoid Lesions*____$7.50

☐ Enter my series subscription

☐ Begin with *Child* $8.50 ☐ Begin with *Welch*

Name_____

Address_____

SJG 12-64

The Journal of the TENNESSEE MEDICAL ASSOCIATION

Published Monthly

By Tennessee Medical Association

OFFICE OF PUBLICATION, 112 LOUISE AVENUE, NASHVILLE, TENNESSEE 37203

Second Class Postage Paid at Nashville, Tennessee

Volume 57
No. 12

DECEMBER, 1964

Per Year, $5.00
Single Copy, 50 Cents

Published Monthly

Contents

Eventration of the Left Hemidiaphragm with Partial Volvulus of the Stomach, J. LYNN HERRINGTON, JR., M.D., Nashville, Tenn. 463

Case Reports

PULMONARY TUBEROUS SCLEROSIS: A Case Report and Brief Review of the Literature, WILLIAM F. SCHMIDT, M.D., Bristol, Tenn. 468

Femoral Hernias in Infants and Young Children, JOE F. BRYANT, M.D., Lebanon, Tenn. 473

Clinicopathologic Conference 475

President's Letter 480

Editorial 481

Deaths 482

Programs and News of Medical Societies 482

National News 483

Medical News in Tennessee 484

Personal News 485

Announcements 487

1964 Members of TMA 489

Instructions to Contributors

Manuscripts submitted for consideration for publication in the JOURNAL OF THE TENNESSEE MEDICAL ASSOCIATION should be addressed to the Editor, Dr. R. H. Kampmeier, Vanderbilt University Hospital, Nashville 12, Tennessee.

Manuscripts must be typewritten on one side of letter-weight paper. Either double or triple spacing and wide margins must be provided to facilitate editing which will be legible for the printer.

Bibliographic references should not exceed ten or twelve in number documenting key publications. They should appear at the end of the paper. The bibliographic references must conform to the style used in the American Medical Association publications, as,—Alais, F. G.: What Is Known About It, J. Tennessee M. A., 35:132, 1950.

Illustrations must be mounted on white cardboard and be numbered. The editor will determine the number, if any, of illustrations to be used. Additional illustrations will be charged to the author. The author's name should appear on the back of each illustration.

If reprints are desired, the requested number should be indicated in the letter accompanying the manuscript. The author will be billed by the publisher.

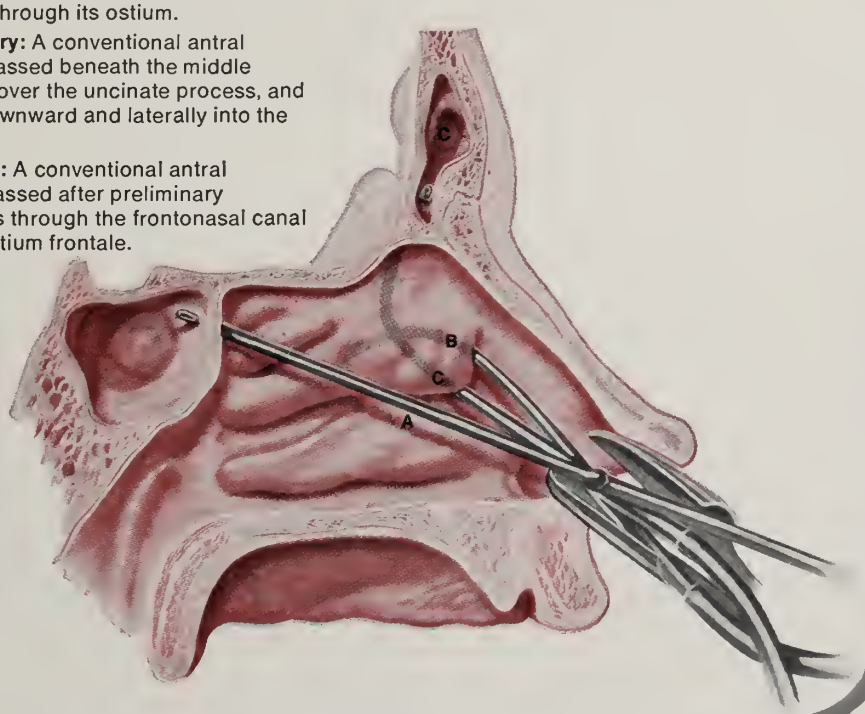
DEVOTED TO THE INTERESTS OF THE MEDICAL PROFESSION OF TENNESSEE
R. H. KAMPMEIER, M.D., Editor
This Association Does Not Officially Indorse Opinions Presented in Different Papers Published herein
Copyright, 1964, by the Tennessee Medical Journal

A rhinologic approach to the sinuses
Sagittal anatomical section of nasal cavity showing approach for probing or irrigation by cannulas.

A—Sphenoid: A sphenoid cannula (under 13.5 cm.) passed around the middle and superior turbinates to the anterior wall of the sinus through its ostium.

B—Maxillary: A conventional antral cannula passed beneath the middle turbinate, over the uncinate process, and rotated downward and laterally into the ostium.

C—Frontal: A conventional antral cannula passed after preliminary maneuvers through the frontonasal canal into the ostium frontale.



In colds and sinusitis
Neo-Synephrine® sooner
hydrochloride
(Brand of phenylephrine hydrochloride)
can help prevent emergency measures later

Before complications arise in colds and sinusitis, Neo-Synephrine solutions and sprays reduce nasal turgescence on contact — to promote essential aeration and drainage. Turbinates shrink, sinus ostia open and drainage is freed. Relief is instant and the threat of complications is lessened.

In the treatment of sinusitis, the ¼ per cent solution is a preferred vasoconstrictor, "... most closely approximating physiologic composition with the least 'rebound' tendency...."* Gentle Neo-Synephrine is well tolerated by delicate respiratory tissues. Systemic effects are practically nil, post-therapeutic turgescence is minimal and repeated applications do not lessen its effectiveness. Neo-Synephrine has been a standard among vasoconstrictors since 1935.

Available in plastic nasal sprays for adults (½%) and children (¼%), in solutions of ⅛, ¼ or 1 per cent.

*Reed, G. F.: Sinusitis, New England J. Med. 267:402, Aug. 23, 1962.

Winthrop Laboratories
New York, N. Y. Winthrop

(1839M)



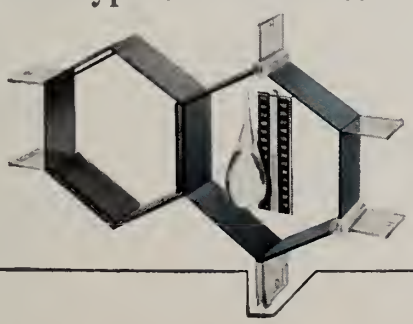
Just turned hypertensive

A 15 mm. Hg drop in diastolic pressure would also suit her very well

For suitably gradual, physiologic hypotensive treatment



HYDROMOX®
QUINETHAZONE-TABLETS
antihypertensive diuretic



HYDROMOX Quinethazone is excellent for use in early hypertension. Extremely well tolerated, the average reported reduction in diastolic pressure is 15 mm. Hg,[1,2] just right for patients with mild to moderate diastolic elevations. Systolic pressure lowered accordingly. A convenient, single daily dose of one to two 50 mg. tablets is usually sufficient.

INDICATED in hypertension with or without edema, and in all types of edema involving salt retention. May be helpful in some cases of lymphedema, idiopathic edema and edema due to venous obstruction.

SIDE EFFECTS: Skin rash (rare), gastrointestinal disturbances, weakness and dizziness, seldom so severe that drug should be stopped. Generally, the adverse effects sometimes associated with the thiazide diuretics are possible. Pre-existing electrolyte abnormalities may be aggravated.

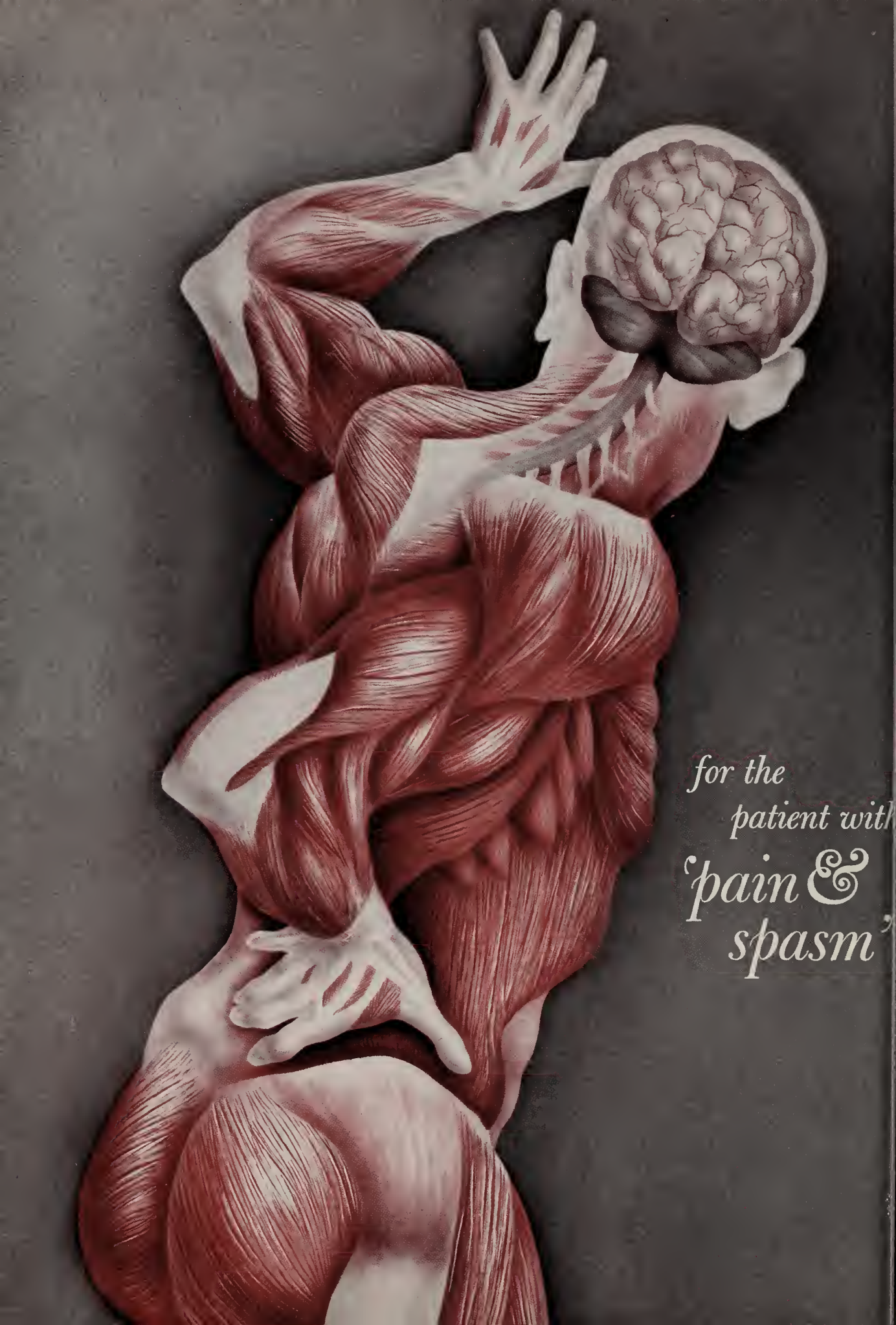
CONTRAINDICATION: Anuria.

1. Steigmann, F., and Griffin, R.: Evaluation of Quinethazone, a New Diuretic. J. Amer. Geriat. Soc. 11:945 (Oct.) 1963.

2. Schwartz, M.: Office Evaluation of a New Diuretic in Patients with Hypertensive Diseases. Scientific Exhibit Presented at the Clinical Meeting of the American Medical Association, Los Angeles, California, Nov. 25-28, 1962.

LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, N.Y. Lederle

8370-4


for the
patient with
'pain &
spasm'

pain *is almost invariably a presenting symptom in cases of skeletal muscle* *spasm*

In some instances, the pain subsides on relaxation of the muscles in spasm. In others, relaxant therapy alone fails to give adequate relief, and supplementary analgesia (and possibly sedation) are indispensable, as in cases of:

provocative pain, when muscle spasm is triggered by some painful underlying musculoskeletal defect.

residual pain, when relaxation of severe spasticity leaves a degree of myalgia that tends to reinvoke spasm.

severe pain, when the degree of pain is such as to cause persistence of symptoms in spite of relaxant therapy.

emotionally aggravated pain, when anxiety or agitation creates tension that thwarts the efficacy of both relaxant and analgesic medication.

In such cases, ROBAXISAL and ROBAXISAL-PH have proven highly effective in assuring decisive and comprehensive relief. The ROBAXISAL formula—of ROBAXIN (methocarbamol), the potent muscle relaxant, together with aspirin, the time-tested and proved analgesic—produces higher plasma salicylate levels than equivalent doses of aspirin alone, and serves effectively to control both spasm and pain. ROBAXISAL-PH's combination of ROBAXIN (methocarbamol) with the analgesic-sedative ingredients of the PHENAPHEN formula—including phenobarbital—helps additionally to ease apprehension.

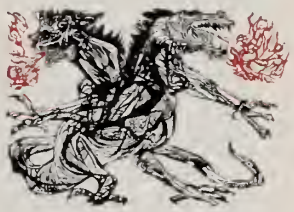
ROBAXISAL®

Robins

Each pink-and-white laminated Tablet contains:
ROBAXIN (methocarbamol, Robins) .....400 mg. Aspirin (5 gr.).....325 mg.
U.S. Pat. No. 2770649

ROBAXISAL®-PH

Each green-and-white laminated Tablet contains:
ROBAXIN .....400 mg. (methocarbamol, Robins)
Phenacetin (1½ gr.)....97 mg.
Aspirin (1¼ gr.).....81 mg.
Hyoscyamine sulfate 0.016 mg.
Phenobarbital (⅛ gr.)....8.1 mg.
(Warning: May be habit forming)



"PAIN & SPASM"
–a two-headed dragon!

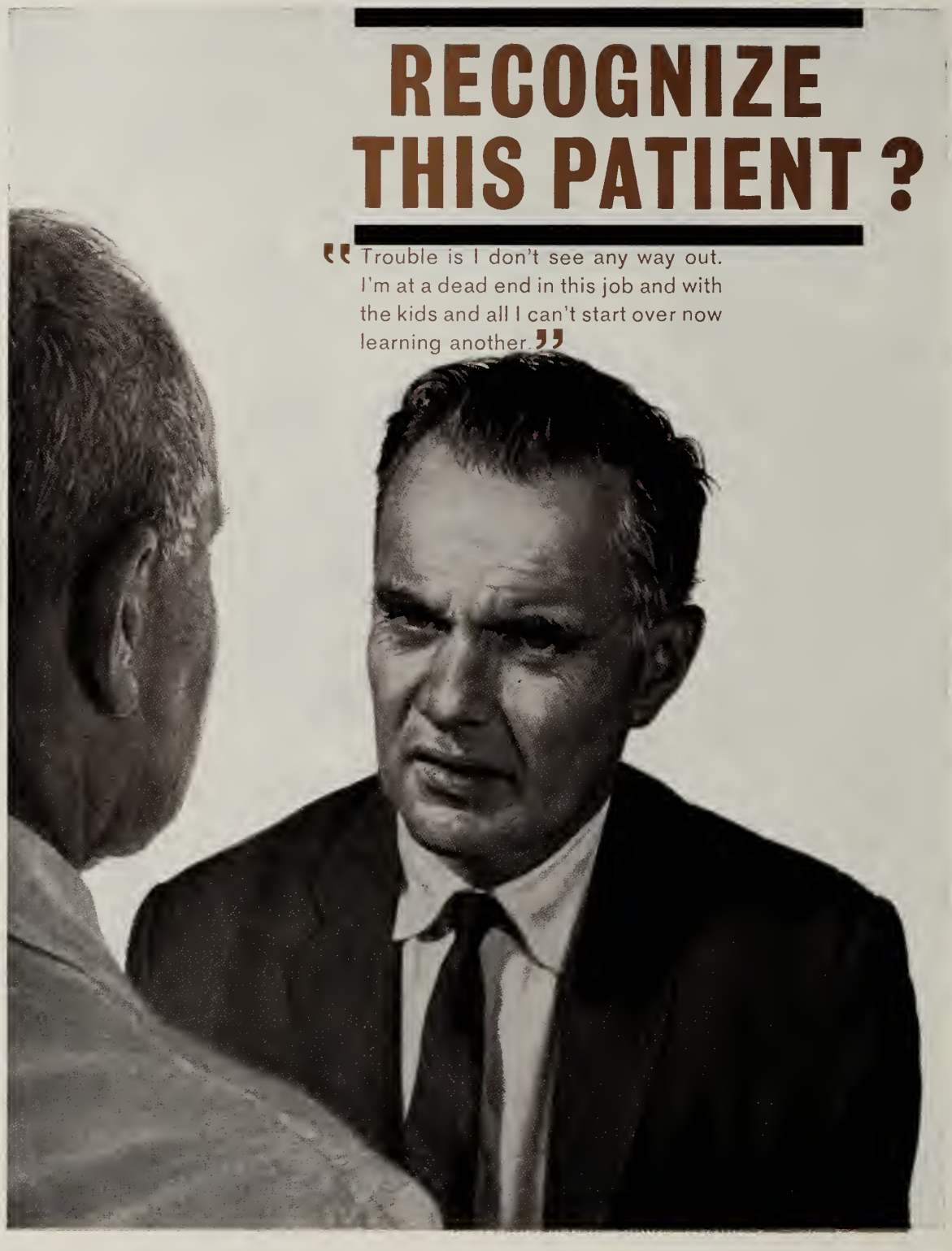
ROBAXISAL and ROBAXISAL-PH are indicated in strains and sprains, painful disorders of the back, "whiplash" injury, myositis, pain and spasm associated with arthritis, torticollis, and headache associated with muscular tension.

Side effects such as lightheadedness, slight drowsiness, dizziness and nausea may occur rarely in patients with intolerance to drugs, but they usually disappear on reduction of dosage.

Contraindicated for patients hypersensitive to any component of the formulations. There are no specific contraindications to methocarbamol, and untoward reactions are not to be expected.

A. H. ROBINS CO., INC., Richmond 20, Virginia

RECOGNIZE THIS PATIENT?



Indications: Depression, both acute (reactive) and chronic, especially when the depression is accompanied by anxiety, insomnia, and related symptoms. **Contraindications:** Benactyzine hydrochloride is contraindicated in glaucoma. Previous allergic or idiosyncratic reactions to meprobamate contraindicate subsequent use. **Precautions:** Should administration of meprobamate cause drowsiness or visual disturbances, the dose should be reduced. Operation of motor vehicles or machinery or other activity requiring alertness should be avoided if these symptoms are present. Effects of excessive alcohol may possibly be increased by meprobamate. Prescribe cautiously and in small quantities to patients with suicidal tendencies. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction; withdraw gradually after prolonged use at high dosage. Abrupt withdrawal may precipitate recurrence of pre-existing symptoms, or withdrawal reactions including, rarely, epileptiform seizures. Grand mal seizures may be precipitated in persons suffering from both grand and petit mal. **Side effects:** Side effects associated with 'Deprol' have consisted primarily of drowsiness and occasional dizziness, and infrequent skin rash and nausea. *Benactyzine hydrochloride* – Benactyzine hydrochloride, particularly in high dosage, may produce dizziness, thought-blocking, a sense of depersonalization, and a subjective feeling of muscle relaxation, as well as anticholinergic effects such as blurred vision, dryness of mouth, or failure of visual accommodation. Other reported side effects have included gastric distress, allergic response, ataxia, and euphoria.

When you recognize depression and anxiety traceable to an emotionally charged situation with no somatic disorder

—*start the patient on 'Deprol'*

Typical situations in which 'Deprol' is indicated:

marital or other family problems ■ death of a loved one ■ financial worries ■ fear of cancer, heart disease or other life-threatening illness ■ pre- and post-operative apprehensions ■ retirement problems, and many other stressful situations which cause the patient to feel a sense of loss, guilt or unworthiness

Advantages of 'Deprol'

1. By relieving both depression and anxiety, 'Deprol' lifts the mood of the depressed patient without the agitation and "jitters" that often accompany "energizer" therapy alone.
2. 'Deprol' restores normal sleep, relaxes physical tensions, and improves appetite.
3. 'Deprol' acts rapidly—patients often respond within a week or two.
4. 'Deprol' is relatively nontoxic and free of side effects.
5. When depression and anxiety accompany physical illness, 'Deprol' is compatible with drugs used to treat these organic conditions.

Deprol®

meprobamate 400 mg. + benactyzine hydrochloride 1 mg.

WALLACE LABORATORIES / *Cranbury, N. J.*

CD-3567

Meprobamate – Drowsiness may occur and, rarely, ataxia, usually controlled by decreasing the dose. Allergic or idiosyncratic reactions are rare, generally developing after one to four doses of the drug. Mild reactions are characterized by an urticarial or erythematous, maculopapular rash. Acute nonthrombocytopenic purpura with peripheral edema and fever, transient leukopenia, and a single case of fatal bullous dermatitis after administration of meprobamate and prednisolone have been reported. More severe and very rare cases of hypersensitivity may produce fever, chills, fainting spells, angioneurotic edema, bronchial spasm, hypotensive crises (1 fatal case), anuria, stomatitis, proctitis, and anaphylaxis. Treatment should be symptomatic and the drug not reinstituted. Isolated cases of agranulocytosis and thrombocytopenic purpura, and a single fatal instance of aplastic anemia have been reported, but only when other drugs known to elicit these conditions were given concomitantly. Fast EEG activity has been reported, usually after excessive meprobamate dosage. Massive overdosage may produce lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse. **Dosage:** Usual starting dose, one tablet three or four times daily. May be increased gradually to six tablets daily and reduced gradually to maintenance levels upon establishment of relief. Doses above six tablets daily are not recommended even though higher doses have been used by some clinicians to control depression and in chronic psychotic patients. **Supplied:** Light-pink, scored tablets, each containing meprobamate 400 mg. and benactyzine hydrochloride 1 mg. *Before prescribing, consult package circular*



ACHROCIDIN®

TETRACYCLINE HCl-ANTIHISTAMINE-ANALGESIC COMPOUND

Each Tablet contains:

ACHROMYCIN® Tetracycline HCl	125 mg.	Caffeine	30 mg.
Acetophenetidin (Phenacetin)	120 mg.	Salicylamide	150 mg.
		Chlorothen Citrate	25 mg.

Effective in controlling tetracycline-sensitive bacterial infection and providing symptomatic relief in allergic diseases of the upper respiratory tract. Possible side effects are drowsiness, slight gastric distress, overgrowth of nonsusceptible organisms. Tooth discoloration may occur only if the drug is given during tooth formation (late pregnancy, the neonatal period, early childhood). Reduce dosage in impaired renal function. Average Adult Dosage: 2 Tablets four times daily.

LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, New York

Lederle

8265 4



The discharged mental patient... and Thorazine®

brand of chlorpromazine

"The average practitioner is quite capable of handling the vast majority of ex-institutionalized patients by regulation of medication, reassurance, manipulation of the environment where necessary, and . . . other technics." Kline, N.S.: Postgrad. Med. 27:620 (May) 1960.

The family physician must often assume responsibility for the discharged mental patient. Thorazine (chlorpromazine, SK&F) can be a valuable adjunct to the continuing care of this patient, because it helps prevent relapses by insulating him from the impact of stressful experiences. For successful rehabilitation and prevention of rehospitalization, however, the former mental patient—and often his family—also needs the guidance and counsel of his physician.

Many physicians are surprised by the high doses of Thorazine (chlorpromazine, SK&F) used in patients released to their care from mental hospitals. This surprise may be expressed by a drastic reduction in dosage "to play it safe"—with serious consequences for the patient.

The successful maintenance of former mental patients requires adequate, often "high" dosage, and often for prolonged periods of time. Fortunately, these dosages do not mean greater risks for the patient. On the contrary, there is much less risk of serious side effects once a patient has become gradually accustomed to Thorazine (chlorpromazine, SK&F)—*regardless of dosage*—over a period of a few months. Continuing therapy is almost always well tolerated, and is essential to most patients' continued well-being.

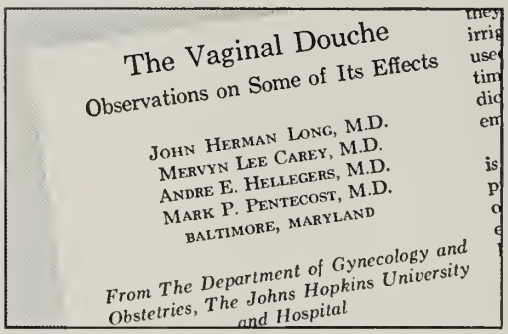
Brief Summary: Thorazine (chlorpromazine, SK&F) has been successfully used for 10 years in the treatment of mental and emotional disturbances, and has proven highly effective in the maintenance therapy of former hospitalized mental patients. *Principal side effects:* The most frequently encountered side effect is transitory drowsiness. Other occasional side effects include: dry mouth, nasal congestion, constipation, miosis, dermatological reactions, photosensitivity, jaundice, hypotension, increased appetite and weight; very rarely, mydriasis, agranulocytosis, extrapyramidal symptoms. *Contraindications:* Comatose states or in the presence of excessive amounts of C.N.S. depressants.

For complete prescribing information, please see *PDR* or available literature.

SK&F *Smith Kline & French Laboratories*

A Valuable Contribution To Medical Literature

A DEFINITIVE STUDY ON DOUCHING



The Vaginal Douche

Observations on Some of Its Effects

JOHN HERMAN LONG, M.D.
MERVYN LEE CAREY, M.D.
ANDRE E. HELLEGERS, M.D.
MARK P. PENTECOST, M.D.
BALTIMORE, MARYLAND

From The Department of Gynecology and Obstetrics, The Johns Hopkins University and Hospital

A SEARCH OF MEDICAL LITERATURE REVEALS NO COMPARABLE OBJECTIVE EVALUATION OF THE SUBJECT.

The authors state at the outset,

"Each physician has his own idea of the value or harm of the vaginal douche and many have expressed such ideas in writing. Such opinions have been arrived at without any intensive investigation or observation of subjects using douches as compared to those not using them. The purpose of this study is to report our observations on three groups of patients, one taking no douches, a second douching with a medicated solution* and a third douching with plain water."[1]

1. West. J. Surg., Obsts. & Gynec.: *71*:122-127, 1963

*The medicinal powder used in this study was META CINE®, a scientifically formulated preparation containing: papain, lactose, citric acid, methyl salicylate, eucalyptol, menthol and chlorothymol.

OBSERVATIONS BASED ON EXTENSIVE AND THOROUGH EXAMINATION SCHEDULE.

"One hundred patients were selected at random, regardless of their chief complaint, from the general population attending the Out-Patient Gynecology Clinic of The Johns Hopkins Hospital. Those selected were reexamined at 1, 3, 6, 9 and 12 months after the initial visit."

"At intervals patients were switched to the regimen of another group so that comparison of the effect of douching or not douching might be made in the same individual."

Three years were required to complete the study.

An evaluation of the objective findings of the study demonstrates that douching with META CINE® had the following effects on vaginal secretion:

- increased Doderlein organisms,
- proved effective in lowering WBC counts,
- proved effective in increasing glycogen content.

META CINE® was found to be a good antagonist to vaginal discharge and irritation—and also proved effective in reducing cervicitis.

No untoward effects of douching were encountered in the study.

Reprints of the complete study and professional samples of Meta Cine are available on request.

BRAYTEN PHARMACEUTICAL COMPANY • *Chattanooga 9, Tennessee*

the problem: diabetic and overweight

the answer: "...if the [diabetic] patient is overweight...our first choice is phenformin [DBI], since this is the only oral hypoglycemic agent commercially available at present which does not promote fat deposit."[1]

"...with phenformin [DBI] there may be less preferential stimulation of fat synthesis in the obese, diet-resistant diabetic, favoring both blood sugar and body weight control."[2]



to manage the stable adult diabetic who is overweight

DBI® tablets 25 mg. **DBI-TD** timed-disintegration capsules 50 mg.

BRAND OF PHENFORMIN HCl

DBI together with a proper diet usually affords effective control in the overweight ketoacidosis-resistant diabetic... reduces high blood sugar and elevated serum insulin levels, and encourages gradual weight loss toward normal.

side effects: Gastrointestinal, occurring more often at higher dosage levels, abate promptly upon dosage reduction or temporary withdrawal. **precautions:** Occasionally an insulin-dependent patient will show "starvation" ketosis (acetonuria without hyperglycemia) which must be differentiated from "insulin-lack" ketosis which is accompanied by acidosis, and treated accordingly. Lactic acidosis has been reported in nondiabetics and diabetics treated with insulin, with diet, and with DBI. Question has arisen regarding possible contribution of DBI to lactic acidosis in patients with renal impairment and azotemia and also those with severe hypotension secondary to myocardial or bowel infarction. Periodic B.U.N. determinations should be made when DBI is administered in the presence of chronic renal disease. DBI should not be used when there is significant azotemia. Any cardiovascular lesion that could result in severe or sustained hypotension, which may itself lead to development of lactic acidosis, should be considered cause for immediate discontinuation of DBI at least until normal blood pressure has been restored and is maintained without vasopressors. Should lactic acidosis occur from any cause, vigorous attempts should be made to correct circulatory collapse, tissue hypoxia, and pH. **contraindications:** Severe hepatic disease, renal disease with uremia, cardiovascular collapse. Not recommended without insulin in acute complications of diabetes (metabolic acidosis, coma, severe infections, gangrene, surgery). **pregnancy warning:** *During pregnancy, until safety is proved, use of DBI, like other oral hypoglycemic drugs, is to be avoided.* Consult product brochure for full information.

1. Faludi, G.: J. Am. Med. Women's Assoc. 18,722, 1963. 2. Weller, C. et al.: Scientific Exhibit, A.M.A., June 1962.

U. S. VITAMIN & PHARMACEUTICAL CORP. • 800 Second Ave., New York, N.Y. 10017



"Gesundheit!"

...is just for the sneeze

but for symptomatic relief of the common cold...

'EMPRAZIL'®

TABLETS

Each layered tablet contains:

'Sudafed'® brand Pseudoephedrine Hydrochloride	20 mg.
'Perazil'® brand Chlorcyclizine Hydrochloride	15 mg.
Phenacetin	150 mg.
Aspirin	200 mg.
Caffeine	30 mg.

To relieve the aches, pains, fever and respiratory congestion of the common cold, flu or grippe with one product ...specify 'Emprazil'.

Caution: While pseudoephedrine is virtually without pressor effect in normotensive patients, it should be used with caution in hypertension. Also, while chlorcyclizine has a low incidence of antihistaminic drowsiness, the usual precautions should be observed.

Supplied: Bottles of 100 and 1000.

Also available with codeine—on prescription only—as **'EMPRAZIL-C'®** tablets

Complete literature available on request from Professional Services Dept. PML.

BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, N.Y.

why does 150 mg.



do more than 250 mg.



of other tetracyclines?

Because it has up to 3½ times the *in vitro* antibacterial activity[1]...combined with lower rate of decay in serum, slower renal clearance...a favorable depot effect, resulting from protein binding...all providing rapid, higher and sustained *in vivo* activity with as much as 2 days' extra activity.

DECLOMYCIN®

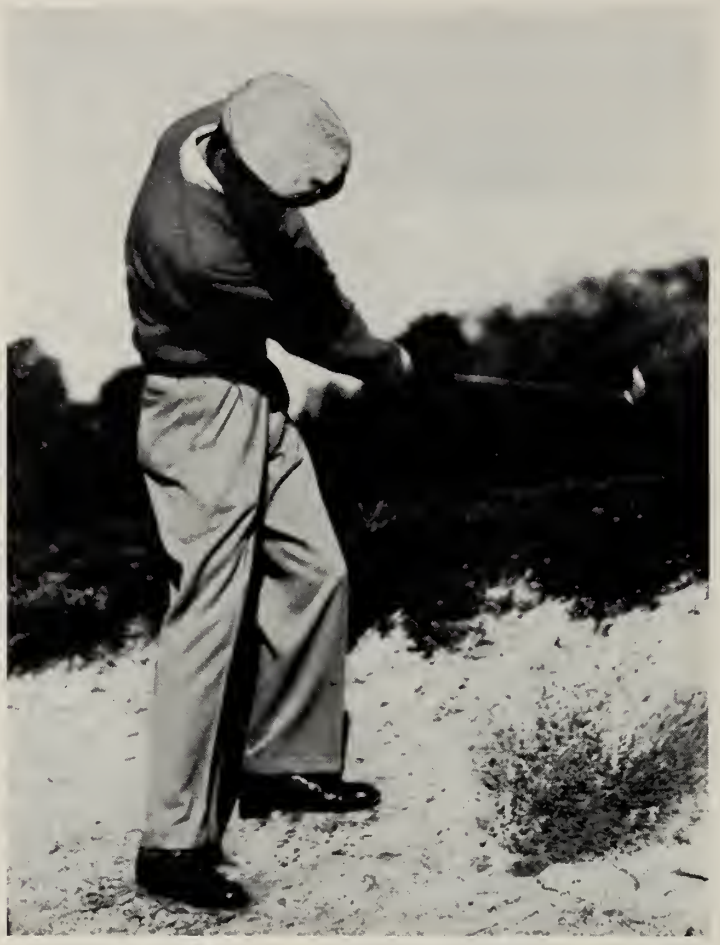
DEMETHYLCHLORTETRACYCLINE HCl

Effective in a wide range of everyday infections—respiratory, urinary tract and others—in the young and aged—the acutely or chronically ill—when the offending organisms are tetracycline-sensitive. **Side Effects** typical of tetracyclines which may occur: glossitis, stomatitis, proctitis, nausea, diarrhea, vaginitis, dermatitis, overgrowth of nonsusceptible organisms. Also: photodynamic reaction (making avoidance of direct sunlight advisable) and, very rarely, anaphylactoid reaction. Reduce dosage in impaired renal function. The possibility of tooth discoloration during development should be considered in administering any tetracycline in the last trimester of pregnancy, in the neonatal period, and in early childhood. *Capsules,* 150 mg. and 75 mg. of demethylchlortetracycline HCl. *Average Adult Daily Dosage:* 150 mg. q.i.d. or 300 mg. b.i.d. 1. Sweeney, W. M.; Dornbush, A. C., and Hardy, S. M.: Demethylchlortetracycline and Tetracycline Compared. Relative *in vitro* Activity and Comparative Serum Concentrations During 7 Days of Continuous Therapy. *Amer. J. Med. Sci.* 243:296 (Mar.) 1962.

LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, New York

7516-3

Lederle



Your patient doesn't have to be in the Masters to get sprains and strains

Regardless of the etiology of muscle sprain or strain, 'SOMA' COMPOUND helps relieve pain and relax muscle. Patient comfort can be increased and recovery time shortened.

Soma® Compound

carisoprodol 200 mg., acetophenetidin 160 mg., caffeine 32 mg.

rational combination therapy for sprains and strains: relaxes muscle, relieves pain. Also available with ¼ gr. codeine as 'SOMA' COMPOUND with CODEINE: carisoprodol 200 mg., acetophenetidin 160 mg., caffeine 32 mg., codeine phosphate 16 mg. (Warning: may be habit-forming.)

BRIEF SUMMARY

'SOMA' COMPOUND; 'SOMA' COMPOUND plus CODEINE: carisoprodol, acetophenetidin, caffeine, codeine phosphate. *Warning: Codeine may be habit-forming.* **Indications:** 'Soma' Compound and 'Soma' Compound with Codeine are indicated for relief of pain and stiffness in traumatic, rheumatic and other similar conditions. **Contraindications:** Allergic or idiosyncratic reactions to carisoprodol or codeine. **Precautions:** *Acetophenetidin*—May damage the kidneys when used in large amounts or for long periods. *Codeine*—Should be used with caution in addiction-prone individuals. *Carisoprodol*—Like other central nervous system depressants, should be used with caution in patients with known propensity for taking excessive quantities of drugs and in patients with known sensitivity to compounds of similar chemical structure, e.g., meprobamate. **Side effects:** *Codeine*—Nausea, vomiting, constipation, and miosis. *Carisoprodol*—The only side effect reported with any frequency is drowsiness, usually on higher than recommended doses. One instance each of pancytopenia and leukopenia occurring when carisoprodol was administered with other drugs has been reported as has an instance of fixed drug eruption with carisoprodol and subsequent cross-reaction to meprobamate. Rare allergic reactions, usually mild, have included one case each of anaphylactoid reaction with mild shock and angioneurotic edema with respiratory difficulty, both reversed with appropriate therapy. Other rarely observed reactions have included dizziness, ataxia, agitation, increase in eosinophil count, and gastrointestinal symptoms. Massive overdosage may produce coma and/or mild shock and respiratory depression. **Dosage:** 'Soma' Compound and 'Soma' Compound with Codeine, one or two tablets three times daily and at bedtime. **Supplied:** 'Soma' Compound, orange tablets, each containing carisoprodol 200 mg., acetophenetidin 160 mg., and caffeine 32 mg. 'Soma' Compound with Codeine, white, lozenge-shaped tablets, each containing carisoprodol 200 mg., acetophenetidin 160 mg., caffeine 32 mg., and codeine phosphate 16 mg. Narcotic order form required. *Before prescribing, consult package circular.*

WALLACE LABORATORIES
Cranbury, N. J.

CSO-3518

for you and your patients...

greater bacteriostatic protection than with any other leading antibacterial bar soap... new Safeguard



New Safeguard provides the regular user with greater sustained reduction of skin bacteria than any other leading antibacterial bar soap. This heightened effectiveness is achieved through a more potent, yet excellently tolerated combination of antibacterial agents.* Exhaustive laboratory and clinical tests have proved Safeguard's...

- **superior residual bacteriostatic effect**
- **superior control of S. aureus**
- **unsurpassed safety and mildness**

*Safeguard contains 3,5-di- and 3,4',5-tribromosalicylanilides, 4,4'-dichloro-3- (trifluoromethyl) carbanilide, and 3,4,4'-trichlorocarbanilide.

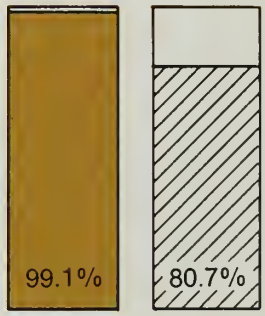
here are the facts on Safeguard's superior antibacterial effectiveness

The superior antibacterial action of Safeguard has been demonstrated by a variety of techniques. Below are some of the comparative results obtained with Safeguard ▬ and another leading deodorant and antibacterial bar soap containing 0.5% hexachlorophene and 0.5% 3,4,4'-trichlorocarbanilide. ▨

superior residual antibacterial effect proved by handwashing tests

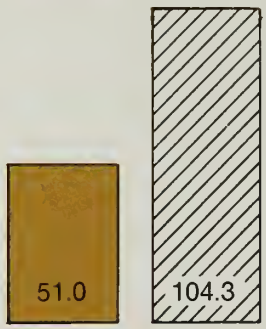
In a modified Price multiple washbasin procedure, Safeguard attained an average reduction of 99.1% in the number of organisms recoverable from the final rinse water, as compared to an average of 80.7% for the other antibacterial bar soap tested. Both products had been used exclusively for four days prior to evaluation.

Safeguard has also proved its superior residual bacteriostasis in field tests conducted under everyday household conditions as measured by a simplified washbasin technique.



superior residual antibacterial effect confirmed by skin stripping technique

Safeguard and the other antibacterial bar soap were used for normal everyday toilet purposes by a group of housewives for 14 days. Layers of superficial skin cells were then taken by a stripping technique to determine the density of the bacterial population. The average count per 2.25 sq. cm. for Safeguard was 51.0 while the finding for the other antibacterial bar was 104.3—more than double Safeguard's reading.



superior control of S. aureus demonstrated in laboratory and field tests

In vitro serial dilution tests with **S. aureus** showed Safeguard to inhibit growth at a minimal concentration of 3 p.p.m. while the other antibacterial bar soap required 4 p.p.m. to produce this effect. Interestingly enough, a leading surgical scrub liquid detergent containing 3% hexachlorophene was inhibitory at 7 p.p.m. in this instance. With two antibiotic resistant strains of **S. aureus,** Safeguard maintained its level of effectiveness. **In vivo** studies have also demonstrated Safeguard's superiority in reducing the number of persons carrying this potential pathogen.

testing has provided extensive evidence of Safeguard's mildness and safety

Repeat patch testing and careful professional observation of the skin of regular users has shown that Safeguard is as mild as any other quality toilet soap—as suitable for the nursery as for the operating room. Exhaustive tests have also documented the safety of its antibacterial components.

SAFEGUARD'S IMPORTANCE TO YOU... Safeguard's superior antibacterial effect makes it of particular value to physicians and nurses because of their greater than average exposure to pathogenic organisms.

For further information please write to: Director of Medical Programs, P.O. Box 599. PROCTER & GAMBLE, CINCINNATI, OHIO 45201



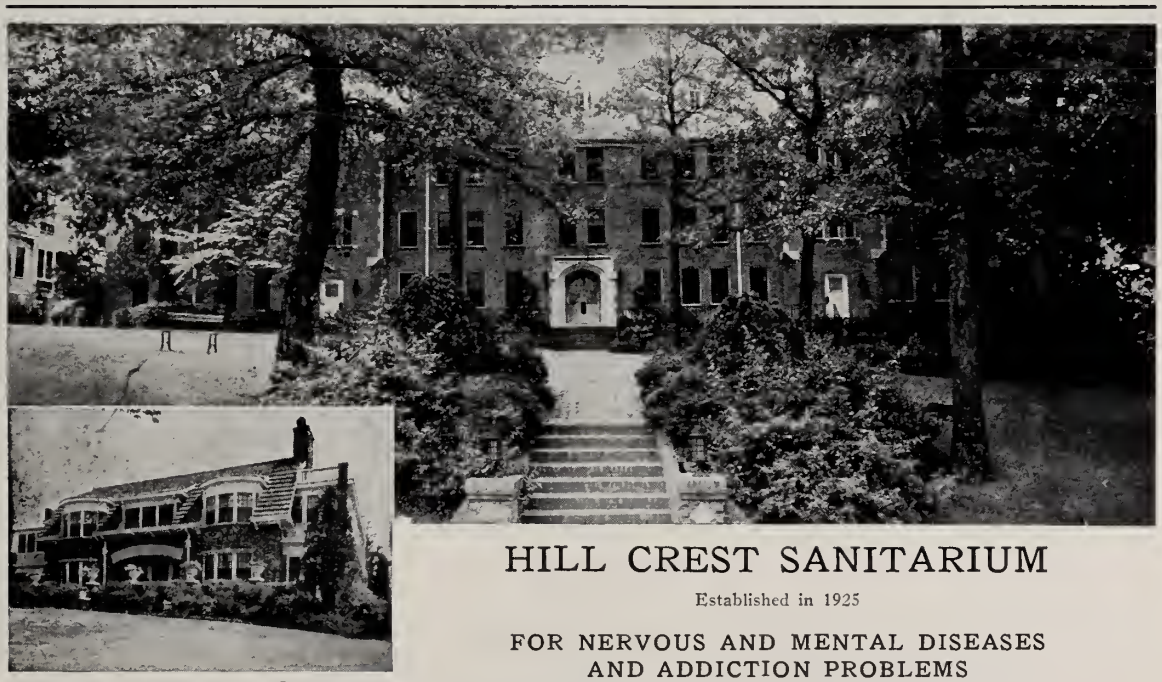
002R64



11:47 pm 11:53 pm 12:06 am

The meaningful pause. The energy it gives. The bright little lift. Coca-Cola with its never too sweet taste, refreshes best. Helps people meet the stress of the busy hours. This is why we say things go better with Coke

TRADE-MARK ®



Out-Patient Clinic and Offices

HILL CREST SANITARIUM

Established in 1925

FOR NERVOUS AND MENTAL DISEASES
AND ADDICTION PROBLEMS

Nashville Surgical Supply Company

The Physician and Hospital's Complete Supply & Service Source

Physicians equipment and supplies

Hospital equipment and supplies

Laboratory equipment and supplies

THE MOST COMPLETE DRUG AND BIOLOGICAL SUPPLY SOURCE IN TENNESSEE

Distributor for Standard and Mattern X-Ray Equipment and Supplies

24-Hour Emergency Service

Nashville Surgical Supply Co., Incorporated

1911 Church St.

Nashville, Tennessee

Phone AL 5-4601



"Wonderful...haven't had opening in both nostrils for years"*

(clearly decongested with Dimetapp)

Dimetapp lets your "stuffed-up" patients *breathe easy again.* Each long-acting Extentab works hard for up to 10-12 hours clearing away stuffiness, turning off the drip, and unplugging congestion that accompanies upper respiratory conditions. Yet, patients seldom experience drowsiness or overstimulation. (A key to success: the Dimetapp formula.) Now that the "stuffy" season is here, keep dependable Dimetapp Extentabs on tap. They get the job done.

FOR NASAL DECONGESTION IN SINUSITIS, COLDS, U.R.I.

UP TO 10-12 HOURS' CLEAR BREATHING ON ONE TABLET

Dimetapp® Extentabs®

(Dimetane® [brompheniramine maleate], 12 mg.; Phenylephrine HCl, 15 mg.; Phenylpropanolamine HCl, 15 mg.)

BRIEF SUMMARY: Indications: Dimetapp reduces nasal secretions, congestion, and postnasal drip for symptomatic relief of colds, U.R.I., sinusitis, and rhinitis. **Side Effects:** In high dosages, occasional drowsiness due to the antihistamine or CNS stimulation due to the sympathomimetics may be observed. **Precautions:** Administer with caution in the presence of cardiac or peripheral vascular diseases and hypertension. **Contraindications:** Antihistamine sensitivity. Not recommended for use during pregnancy.

*Clinical report on file, Medical Department, A. H. Robins Co., Inc.

A. H. ROBINS CO., INC., RICHMOND 20, VA.

THE ARTHRITICS WHO COULD NOT TAKE STEROIDS

The bane of the steroids, new and old, has been certain undesirable metabolic effects—including and water retention, edema, overstimulation of appetite, excessive weight gain, mood swing seemed to be firmly linked to the primary a inflammatory action. For arthritics already overwei or with cardiovascular disease complicated by ede or those who were tense and anxious, steroid tr ment could aggravate their problems. But with advent of ARISTOCORT® Triamcinolone, many these arthritics became "steroid-treatable." The son: Not only did *this* steroid provide gratifying re of inflammation and pain, but it did so *without* penalty of overstimulation of the appetite, exces weight gain, salt and water retention, edema, undesirable euphoria. Six years of widespread use confirmed these benefits for other arthritics as wel those formerly untreatable.



de Effects: Since it may, under some circumstances, oduce many of the unwanted effects common to all rtisone-like drugs, discrimination should always be ercised in administering ARISTOCORT® Triamcino-ne. Any of the Cushingoid effects are possible, as are rpura, G.I. ulceration, increased intracranial pres-re and subcapsular cataract. Corticosteroids gen-ally may mask outward signs of bacterial or viral fections. Catabolic effects to watch for include uscle weakness and osteoporosis. Weight loss may cur early in treatment but is usually self-limiting. *ntraindications:* While the only absolute contra-dications are tuberculosis, herpes simplex and icken pox, there are some relative contraindications ptic ulcer, acute glomerulonephritis, myasthenia gravis, osteoporosis, fresh intestinal anastomoses, diverticulitis, thrombophlebitis, psychic disturbance, pregnancy, infection) to weigh against expected benefits.

A single daily dose may provide effective control, is convenient for the patient, and can be employed in both initial and maintenance therapy.

MAXIMUM STEROID BENEFIT – MINIMUM STEROID PENALTY

Aristocort®

Triamcinolone

scored tablets of 1 mg., 2 mg., 4 mg., 8 mg. or 16 mg.

DERLE LABORATORIES • A Division of AMERICAN CYANAMID COMPANY, Pearl River, New York

Lederle

270-4

Roentgen examination of the chest and fluoroscopic study of the diaphragm are the most important means of establishing a diagnosis of eventration. Paradoxic motion may be seen on fluroscopic examination. Careful clinical observation will at times reveal the presence of peristaltic bowel sounds over the rib cage, and Hoover's sign may be demonstrated. This latter observation, retraction of the lower costal cartilages, is due to a muscular imbalance between the strong intercostal musculature and the weaker atrophic diaphragm.

Treatment

In the patient with an asymptomatic eventration no treatment is required. As stated many infants with this condition will require surgical intervention. Operation is directed toward restoration of the involved diaphragm to its normal position so as to stabilize the mediastinum, prevent cardiac rotation, and restore normal ventilation. Surgical correction, when the left phrenic leaf is involved, will also restore and maintain the stomach in its normal anatomic relation as well as the spleen and splenic flexure of the colon. Operation is indicated in the adult when significant pulmonary, cardiac and gastrointestinal symptoms are present.

The thoracic approach through the seventh or eighth intercostal space affords the best exposure for repair of the eventration. The abdominal route has been recommended in the infant because of the possibility of co-existing intestinal anomalies.[8] Surgical repair of the eventration consists of excision of the thinned-out and atrophic portion of the diaphragm with suture reconstruction using the lateral margins of the diaphragm which are usually normal. If primary reconstruction cannot be done Teflon cloth or Marlex have been used to bridge the defect. An alternate method of reconstruction is simple plication of the weakened portion of the diaphragm using interrupted silk sutures so as to restore the leaf to a position of mid-expiration. Phrenic crush is not recommended as part of the procedure. Of course, there may be some damage inflicted to the smaller branches of the nerve when either the excision or plication operation is carried out.

The purpose of the present report is to cite 2 cases of eventration of the left phrenic leaf encountered in the adult and to describe the mode of management along with the results obtained.

Case 1. A 39 year old man, was admitted to St. Thomas Hospital Oct. 10, 1961, with a 3 year history of increasing epigastric distress, dysphagia and discomfort in his left lower chest. He had had no hematemesis or melena, and there was no history of tuberculosis, pneumonia or lung abscess. He had had no trauma to the abdomen or rib cage.

Blood counts were normal and the EKG. was not remarkable. A chest x-ray film revealed elevation of the left phrenic leaf and the leaf appeared to be thinned-out. (Fig. 1). The right

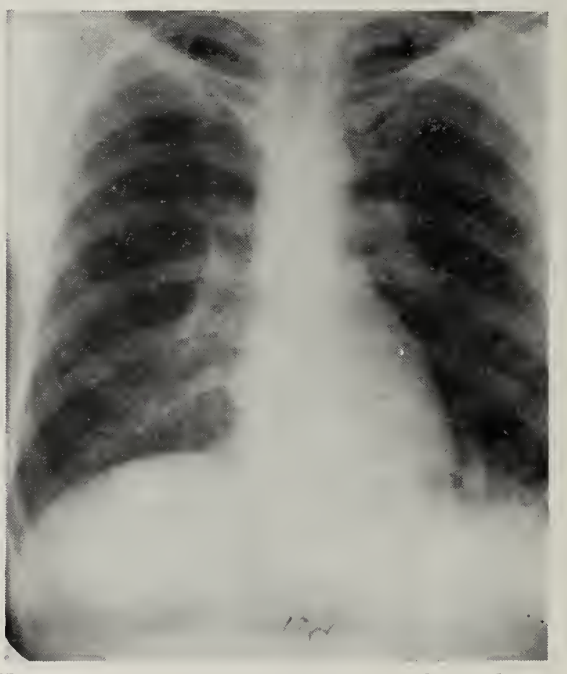


FIG. 1. The roentogram shows the elevated and thinned-out left hemidiaphragm.

hemidiaphragm was in normal position. A cholecystogram was normal, but gastrointestinal series revealed a partial volvulus of the stomach. No obstruction, however, was demonstrated at the esophagogastric junction or at the gastric outlet at the time of the examination. The diagnosis of eventration of the diaphragm with recurring gastric volvulus was made.

On Oct. 13, the left chest cavity was opened through a posteriorlateral incision through the 7th interspace. Marked atrophy and elevation of the phrenic leaf was noted and the hemidiaphragm could actually be delivered through the thoracic incision. The eventration occupied fully one-half of the diaphragm but the lateral borders about the circumference of the diaphragm were of normal consistency. The thinned-out portion was excised and reconstruction was carried out without difficulty using interrupted 2-0 silk su-

tures. The diaphragm was restored to the normal position as were the underlying stomach, spleen and colon.

The postoperative course was normal and the patient was immediately relieved of all digestive symptoms. After almost 3 years postoperative, the diaphragm remains in normal position and functions well on fluorosopic examination. (Fig. 2).



FIG. 2. Postoperative roentogram shows the left hemidiaphragm restored to normal position.

The gastrointestinal series shows the stomach in normal relationship.

Case 2. This 77 year old married woman was admitted to St. Thomas Hospital on May 20, 1964 with a history of several months of dsypnea, pain in the left chest, and dysphagia. In addition, she had had mild dyspepsia for years but this had become worse in recent months. For several weeks prior to admission, regurgitation was noted daily. A weight loss of 10 to 15 pounds had taken place recently. There was a past history of a severe bout of pneumonia 25 years before associated with a prolonged and stormy recovery.

On examination the patient appeared both acute and chronically ill with evidence of weight loss. Blood counts and liver function studies were normal. Chest x-ray study revealed marked elevation of the left hemidiaphragm with paradoxic motion on fluoroscopy. The mediastinal structures were shifted slightly to the right. (Fig. 3). Barium enema revealed an abnormally high position of the splenic flexure and it lay just beneath the eventration. (Fig. 4). A cholecystogram was normal, but on gastrointestinal barium study, a partial volvulus of the stomach was demonstrated with the greater curvature rotated superiorly and lying beneath the eventration. The gastric antrum and duodenum were displaced to the left. In addition, a marked duodenal deformity was present with an ulcer crater. (Figs. 5 and 6.)



FIG. 3. Preoperative view shows the eventration of the left hemidiaphragm with slight mediastinal and tracheal displacement.



FIG. 4. Barium enema reveals the splenic flexure of the colon beneath the eventration.

At operation, the left chest cavity was entered through the 7th intercostal space. The eventration was present and the thinned-out portion of the diaphragm occupied about two-thirds of the total circumference. After excision of this portion, the lateral borders were approximated without tension using interrupted 2-0 silk sutures. A chest tube was inserted and the thoracic wound was closed.



FIG. 5. This is a partial volvulus of the stomach. Note that the duodenum is pulled to the left of the midline and there is an associated duodenal ulcer crater.

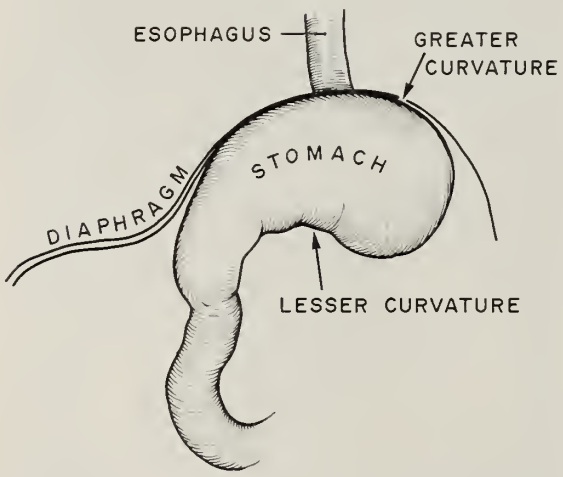


FIG. 6. Schematic sketch illustrating gastric volvulus. Greater curvature is rotated superiorly and lies beneath the eventration. The lesser curvature is displaced inferiorly. The gastric antrum and duodenum are pulled to the left.

The patient was then placed in the supine position and the abdomen was opened through an upper midline incision. Both leaves of the diaphragm now appeared to lie in normal relation and the volvulus of the stomach had been corrected. A bilateral truncal vagotomy was carried out, and a Finney type pyloroplasty done for the active duodenal ulcer. The abdominal wall was then closed in layers with interrupted silk.

The patient had no postoperative complications and was discharged on the 10th postperative day. A chest film during the early postoperative period showed the left phrenic leaf restored to normal position. (Fig. 7). A recent chest film



FIG. 7. Early postoperative film showing the left hemidiaphragm restored to its normal position.

reveals essentially normal findings, and the diaphragmatic motion is normal. The patient has been relieved of all pulmonary, cardiac, and gastrointestinal symptoms.

Discussion

Eventration of the diaphragm may at times be confused on x-ray examination with esophageal hiatus hernia, Bochdalek hernia, and posterior mediastinal cyst or tumor. The great majority of adult eventration results from inflammatory disease.

In the 39 year old Patient (Case 1), the etiology of the eventration was obscure. There was no past history of trauma and no history of postoperative abdominal abscess or pulmonary disease. It is quite likely that the eventration was congenital and remained asymptomatic for years. Partial volvulus of the stomach was the prominent complication resulting from the eventration. The fact that the patient was relatively young with adequate pulmonary reserve probably accounts for the paucity of pulmonary symptoms. In the second case, the eventration may have been related to the pneumonic process which occurred 25 years

prior. The patient had had a prolonged convalescence at this time and it is quite possible that she may have developed a lung abscess or empyema with resultant diaphragmatic involvement. She had pulmonary, cardiac, and gastrointestinal symptoms as a result of the eventration.

Repair was readily accomplished in both cases utilizing a left trans thoracic approach, and it was thought that the abdominal route would have been difficult and less satisfactory. In the second case, however, a pyloroplasty could not have been done through the opening in the diaphragm, and either a thoraco-abdominal or separate abdominal approach was felt necessary. The latter route was chosen as it would seem to be accompanied by less shock and less time consuming for this elderly patient.

From a survey of the literature, few surgical failures have been noted in the maintenance of the restored diaphragm to its normal position. Also this condition appears to be by no means rare, and its surgical repair in the new born and young infant may be a life saving measure. When pulmonary, cardiac, and gastrointestinal symptoms occur as a result of eventration in the adult, serious consideration should be given to surgical repair.

Summary

Eventration of the diaphragm is not an uncommon occurrence.

The anatomic and physiologic abnormalities associated with eventration have been discussed and the symptomatology has been reviewed.

Two cases are cited in which cardiac, pulmonary and gastrointestinal symptoms are described. Relief of symptoms in each case followed repair of the eventration.

References

1. Michelson, E.: Eventration of the Diaphragm, Surgery 49:410, 1961.
2. Arnheim, E. E.: Congenital Eventration of the Diaphragm in Infancy, Surgery 35:809, 1954.
3. Beck, W. C.: Etiologic Significance of Eventration of the Diaphragm, Arch. Surg. 60:1154, 1950.
4. Beck, W. C., and Motsay, D. S.: Eventration of the Diaphragm, A.M.A. Arch. Surg. 65:557:1952.
5. Berman, E. J.: Extralobar (Diaphragmatic) Sequestration of the Lung, A.M.A. Arch. Surg. 76:724, 1958.
6. Bishop, H. C., and Koop, C. E.: Acquired Eventration of the Diaphragm in Infancy, Pediatrics 22:1088, 1958.
7. Monahan, D. T.: Eventration of the Diaphragm Repaired with Tantalum Mesh, New England J. Med. 244:475, 1951.
8. State, D.: The Surgical Correction of Congenital Eventration of the Diaphragm in Infancy, Surgery 25:461, 1949.

MYXOMA OF THE LEFT ANTRIUM. Hair, Thomas E., Jr., Orgain, Edward S., Sealy, Will C., and McIntosh, Henry D., Am. J. Med. 32:560, 1962.

Two cases of myxoma of the left atrium, successfully removed, are reported, and an extensive review of the literature is presented. The similarity to rheumatic mitral valve disease, especially mitral stenosis, is stressed and emphasis is placed on a careful history in the differential diagnosis.

Myxomas comprise 50% of all primary cardiac tumors, a neoplastic origin being accepted by most. Seventy-five are found in the left atrium, the usual site of attachment being the interatrial septum.

Such tumors have been reported in patients from 3 months to 68 years of age, with the vast majority falling between 30 and 60. The male to female ratio is 1 to 3.

The key symptoms to look for are: (1) recurrent dyspnea of sudden onset, especially when related to change in body position; (2) embolic phenomena, particularly in the absence of atrial fibrillation, subacute bacterial endocarditis, or myocardial infarction and, (3) intermittent fever perhaps secondary to degenerative changes in the tumor itself.

Although the entire gamut of murmurs of mitral valvular disease has been described, variability in the same patient should arouse suspicion of a myxoma. There may not even be a murmur. The heart may or may not be enlarged.

The electrocardiogram and routine roentgenogram offer no dependable findings. Cardiac catheterization is of little help; because of extreme friability of the tumor with danger of embolization, direct left atrial puncture is contraindicated.

The authors propose the finding of unilateral venous engorgement in their patients, perhaps secondary to projection of the tumor into the pulmonary vein, as a possible helpful sign.

Although not uniformly reliable, angiocardiography remains the only satisfactory method of confirming the diagnosis preoperatively. More frequent use of such studies along with a high index of suspicion is extremely important, since the development of cardiopulmonary bypass and the use of hypothermia have made successful removal of atrial myxoma a reality. (Abstracted for the Middle Tennessee Heart Association by Jack Kinnard, M.D., Nashville.)

CASE REPORT

PULMONARY TUBEROUS SCLEROSIS: A Case Report and Brief Review Of the Literature

William F. Schmidt, M.D., Bristol, Tenn.

Tuberous sclerosis is a widespread developmental anomaly often hereditary. It is one of the several disease syndromes classified as congenital neuroectodermal dysplasia.[1] Among this group is: von Recklinghausen's disease, Sturge-Weber's syndrome, von Hippel-Lindau's disease and ataxia-telangiectasis.[1] The primary abnormality, according to Moolten,[2] lies in faulty differentiation of the tissues rather than body units. The exact cause of the lesion is not known. It is suggested that there is a pleiotropic effect of autosomal dominant genes.[3] These tissue changes can be influenced by an independent pair of modifying genes.

In 1908, Vogt noted the classic triad of mental deficiency, epilepsy, and adenoma sebaceum that pointed to the diagnosis of tuberous sclerosis. This is a rare heredofamilial disorder of tissue growth affecting most organs of the body. Pulmonary involvement is rare and usually seen without mental disturbance. The occurrence of cystic lung change was first described by Berg and Zachrisson[4] in 1938. Up until 1955, only 14 cases of pulmonary tuberous sclerosis were reported in the world's literature.

The following case presented primarily as disease of the respiratory system without neuropsychiatric symptons. Pregnancy, in this 26 year old white woman, seemed to precipitate and hasten her problem. Her "honeycombed" lung lesions progressed from an asymptomatic state to breathlessness, spontaneous pneumothorax, and to death in less than two and a half years.

Case Report

A 26 year old registered nurse was first seen in August, 1961, with progressive breathlessness of 3 months' duration.

Prior to this, she had worked daily without cough, wheeze, chest pain, hemoptysis or exertional dyspnea. By the 3rd month of her first pregnancy, breathlessness increased rapidly to the point where she could walk no more than a block, and developed occasional nocturnal wheezing. Since she could no longer perform her usual exertional duties, she became quite depressed and often cried. She was then confined to her home until the 9th month of pregnancy when she developed ankle edema, hypertension, albuminuria and was hospitalized. During hospitalization she spontaneously delivered a healthy baby girl, and after a prolonged hospital stay, returned home, unable to care for her infant nor take up her household duties. The breathlessness progressed to the point where climbing 5 steps or walking less than a half a block caused severe panting and wheezing.

In September, 1962, she suddenly became semi-stuporous, complained of extreme shortness of breath and left chest pain. She had suffered a spontaneous left pneumothorax which fully expanded after the use of water seal drainage tubes in the pleural space. Convalescence was prolonged. The patient was sent home as a pulmonary cripple. During the next 6 months, she developed repeated bouts of suppurative bronchitis which responded poorly to medication, and each time she became more and more breathless. She was hospitalized 6 months later in a terminal state, and succumbed to what seemed to be asphyxia.

The *family history* revealed the patient is 1 of 6 siblings. One brother had epilepsy and adenoma sebaceum. One sister had adenoma sebaceum and bone changes of the pelvis described by the radiologist, as melorheostosis. She had 5 children, 4 of whom had adenoma sebaceum. The mother, grandmother, and maternal uncle had adenoma sebaceum. The patient's baby girl is free of skin lesions. On the maternal side, there is a history of epileptiform seizures in the grandchildren, and one child is in an institution for the mentally deficient.

The *past history* of the patient was essentially negative. There was no previous history of respiratory illness and the patient was perfectly well up until her first pregnancy. She had lived in a rural area with no unusual exposure to animals nor noxious dusts.

Physical Examination revealed a well developed, well nourished, apprehensive, breathless 26 year old white woman, 64 in. tall, weighing 132 lbs. There were flesh colored, discrete papules over the nasolabial folds and in a "butterfly" fashion over the malar area, bilaterally. The lesions were firm, 3 to 5 mm. in diameter; several at the base of the nose were pedunculated. B.P. was 120/70, P. 120 and regular, with R. of 34. There were periungual fibroma, bilaterally of the 4th toe, 1 mm. in greatest diameter, and of the 3rd finger on the right hand. The left eyeball was smaller than the right, with an eccentric pupil at 9 o'clock. The chest was held in an inspiratory position and was hyperresonant. The accessory muscles of respiration and abdominal muscles were laboring to give a chest excursion that was almost absent. There were distant, prolonged expiratory wheezes bilaterally. The right ear drum was scarred and intact. The heart was rapid, reg-

ular, and without murmur; P_2 was greater than A_2, and there was no cardiomegaly. The peripheral pulses were intact and equal. Neuromuscular examination revealed no unusual findings. Mentally, she was of average intelligence. The remainder of the examination and the review of systems was unrewarding.

Laboratory Data revealed a normal hemogram and urinalysis. VDRL was nonreactive. Two L. E. Preps were negative. The following chemical analyses were performed: BUN. 51 mg.%, total protein 7.3 Gms./100 ml. with an A/G ratio of 4.8/2.5, and alkaline phosphatase 2.76 units (Bodansky). The following cultural analyses were done: two 24 hour sputums were negative on smear and culture for tubercle bacilli; urine culture grew Micrococcus in significant counts. Histoplasmin fungal skin test was ±; and PPD intermediate was negative. Serum complement fixation test for pulmonary mycosis was negative. Electrophoresis of the serum protein was normal. Arm to tongue circulation time was 15 sec. (Decholin). Arterial blood oxygen saturation was 82.6 and 76.8%; CO_2 was 49.1 and 54.6 mEq./l. Compliance studies showed moderate reduction. VC was 1134 cc. with an MBC of 14 L-Min. EKG showed tall P waves in Lead 2, RSR prime in V_1 and V_2.

X-ray films of the skull showed no calcifications. Those of the fingers showed a small cystic lesion in the distal phalanx of the third finger, right. (Fig. 1.) IV pyelogram revealed



FIG. 1. Distal phalanx of third finger right, shows cystic lesion.

multiple filling defects, suggestive of adenoma of both kidneys. (Fig. 2-A.) Chest x-ray examination in 1956 showed fibrosis and emphysema. By 1961, there was a rapid progression of areas of linear fibrosis and cystic-like pattern in both lower lung fields. The translucencies and discrete fibrotic nodules were as large as 2 mm. (Fig. 2-B and C.)

Comment

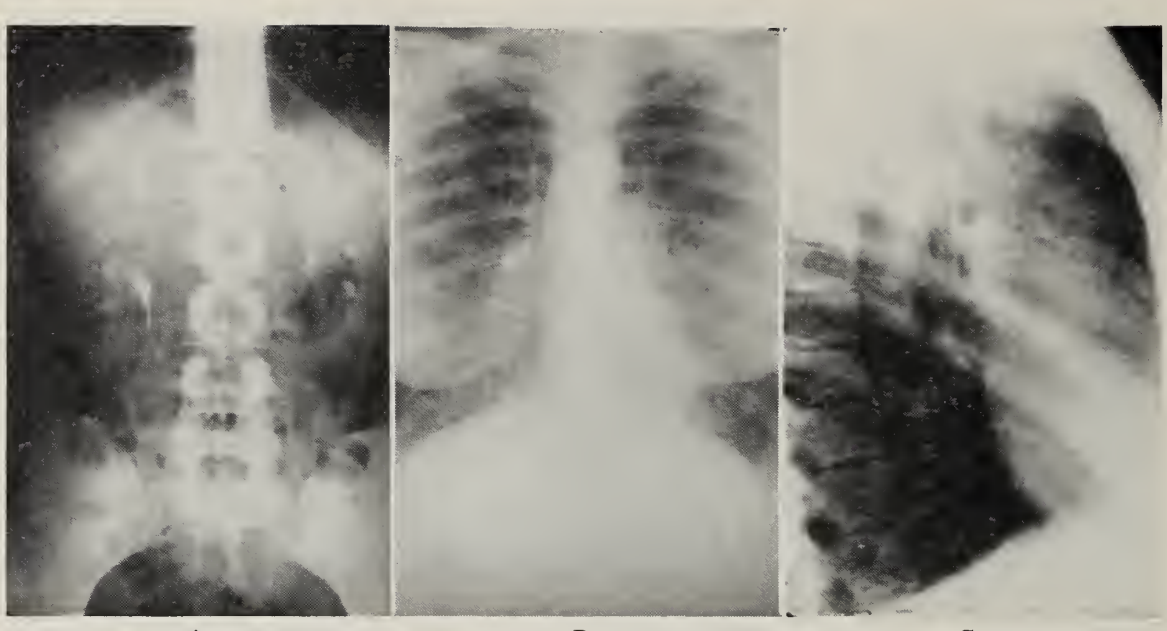
The incidence of tuberous sclerosis has not been accurately established, and the difference in the various surveys probably lies in the fact that the less serious "formes frustes" of the disease are difficult to diagnose. Ross and Dickerson,[5] reported in the general population, an incidence of 1:200,000. Dawson,[6] in 1954, reported an incidence of approximately 1:300,000. The incidence is higher in institutions for epilepsy and mental retardation. European incidence seems to be higher than those in the United States.[3,7] The institutional incidence observed by Penrose[3] in 1938, in England, was 1:250, by Dawson, in 1954, in the United States, 1:300. Dickey[7] reported an incidence of 1:600. Dawson's review noted that there was a high incidence of females, but others have reported the converse, and still others have reported an equal distribution in the sexes. The incidence though, is probably much higher than one would suspect. De La Cruz and LaVeck[8] in 1962, evaluated 1600 children in the Rainier School in Washington and found 200 children, to the age of 10, who had skin lesions suggestive of adenoma sebaceum, convulsions, or calcific cerebral deposits. Eight of the 200 had clinical tuberous sclerosis. This is the highest incidence noted in similar institutions in the United States, and reflects the author's awareness of the "formes frustes" type of disease.

Roentgenologic Findings

Osseous radiologic changes were first reported in the Scandinavian literature in 1924, as being associated with tuberous sclerosis. The bone lesions are found in approximately 60% of the cases.[9] X-ray evidence, therefore, will be helpful in establishing a diagnosis in the "formes frustes," when it appears as an isolated finding such as epilepsy. The lesions found in the calvarium, feet and also the hands, are considered by Hawkins[10] and Dickerson[11] as diagnostic.

Skull. Patchy areas of increased bone density in the calvarium occur in puberty and are most commonly found in the parietal region.[5] These changes have been shown to be due to hyperostosis of the inner table and of the trabeculae of the diploic spaces.[10] A rare manifestation is a suture diastasis, due to increased intracranial pressure, as associated with a subependymal nodule causing obstructive hydrocephalus.[12]

Hands and Feet. There is irregular deposition of subperiosteal bone, commonly on



A. B. C.

Fig. 2. (A) IV pyelogram shows multiple filling defects suggestive of adenoma. (B) Postero-anterior view shows basilar linear fibrosis and cystic pattern. (C) Left lateral view shows linear fibrosis and nodules as large as 2 mm.

the shafts of the second, third and fourth metatarsals, and less commonly on the metacarpals. The cortical bone is unevenly thickened, producing undulations of the contour of the shaft, a cortical pitting.[11,13]

In the phalanges there are cystic changes, bone density, and changes in trabecular pattern. These are common in the hands. The cysts are frequently seen in the terminal phalanges.[14] These were shown to be, not cysts, but areas of nonspecific fibrous replacement of bone surrounded by abundant osteoid matrix. The phalanges also have fragmentation or cortical pitting. These lesions can be serious if they are numerous or confluent. Their size varies in depth, shape; they are usually clearly delineated and are confined to the cortical bone. Adjacent areas may be thickened, but the shaft is rarely widened.[9]

Other lesions of the pelvis and spine are reported, but similar lesions have been seen in other neurocutaneous disorders, such as von Recklinghausen's disease.[15]

X-ray findings in the lungs are nondiagnostic. Ackerman[16] reported findings similar to those found by Berg and Zachrisson,[4] in which they describe a "honeycomb-like pattern made up of scarcely visible nodular, to as large as a hazel nut," translucencies. These are separated by fine, round striae, noticed in both lung fields. They are less prominent at the apex where occasionally cavities are seen. They appear occasionally to resemble miliary disseminations. Symmetrical, coarse, mottling of the lung fields, suggestive of multiple cystic disease has been described. In the advanced form, a reticular pattern and honeycombing are encountered.[12,13]

Clinical Manifestations

Skin. The dermatologic manifestations of tuberous sclerosis are pathognomonic. On the face they present as adenoma sebaceum, on the trunk and extremities, as nevi, pigmentary abnormalities, tumors, such as the fibroma, and peau chagrine. The full blown clinical picture always involves the brain and skin. Dawson states that peau chagrine and subungual fibroma are found in no other disease.[5] At birth, the child usually appears normal, later develops skin changes. They may appear as late in life as age 26, as reported by Kofman and Hyland. Vogt made the first correlation between the skin and cerebral lesions in 1908. Skin lesions are a developmental defect and may be primarily an overgrowth of cellular elements such as blood vessels, sebaceous glands, or hair follicles. Critchley and Earl[17] described three

forms of this condition: (1) the Balzer type—pale lesions without telangiectasis, histologically showing evidence of involvement of the hair follicles; (2) Pringle's nevus—the pink or true telangiectatic type; and (3) the Hallopeau-Laredde type—with the fibroma element predominating and the nodules of excessive hardness.

Recently, Reed and Nickel[18] reported 150 cases in which 90% had well developed facial lesions. When adenomas appeared on the forehead, and were associated with mental deficiency, prognosis was poor. The incidence of skin lesions is given by various authors as from anywhere from 50 or 90%,[10] and may occur on the nasolabial fold, on both cheeks, or on the gentiolabial folds.

Subungual and periungual fibromas occur during puberty and more often involve the toenails and fingernails in females.

Mental retardation is usually the first symptom.[11] The child may be slow to walk, talk, sit, or show other evidences of retarded progress. Epileptiform seizures may or may not occur. If they do, their age of onset is about 3 to 6, and the seizures conform to no pattern. They can be Jacksonian, petit mal, or grand mal, and may occur five or six times a day, or have intervals of no convulsions for 2 or 3 years. Smith and associates,[19] in a review of the literature, note that the therapy for the seizures in tuberous sclerosis needs a higher dosage of anticonvulsant medication than is needed for idiopathic epilepsy. Electroencephalographic findings reported by Dickerson and Hellman[20] show a higher incidence of abnormal readings than that seen in the institutionalized epileptics. The findings are nonspecific and nondiagnostic. There is no specific mental change. The defect is usually in the intellect with psychotic overlays being reported. Paralysis and paresis are rare. Temper tantrums are common.

Comment

Clinically, it is possible to make the diagnosis if two or more of the following are present: mental retardation, epilepsy, adenoma sebaceum, phacoma of the retina, multiple mixed tumors of the kidney, or familial history. Additional support to the diagnosis can be obtained if there are present, cafe-au-lait spots, subungual fibroma, or peau chagrine. This young woman presented with breathlessness, spontaneous pneumothorax, cystic change in the terminal phalanges, adenoma sebaceum, family history, subungual fibroma and IV pyelographic changes suggestive of tumor formation. Her major involvement of adenoma sebaceum appeared early in puberty. X-ray examination of the chest compared with that of 5 years previously showed stable, unchanged, slender, basilar reticulated pattern to the lung fields. Her first symptoms of breathlessness appeared in early adult life, as compared with the non-pulmonary cases in which symptomatology occurs early in infancy. According to Dawson, the usual history is one of 5 to 11 years duration with the predominance of females in the early 20's. There is chronic progressive dyspnea, recurrent pneumothoraces, and an occasional hemoptysis. Death usually follows in approximately five years after the diagnosis is established.

Since the disease is one of a developmental defect, most of the organs are involved.[2] Pulmonary findings are secondary only to involvement of the brain and central nervous system as a serious symptomatic prognostic sign.

Summary

A case of pulmonary tuberous sclerosis is described, in which the patient showed characteristic skin, osseous, retinal, renal and x-ray findings. There was no involvement of the intellect. The literature is reviewed with emphasis on incidence, pathognomonic x-ray findings and skin lesions.

References

1. Kirby, T. J.: Ocular Phakomatoses, Am. J. M. Sc. 282:227, 1951.

2. Moolten, S. E.: Hamartial Nature of the Tuberous Sclerosis Complex and Its Bearing on the Tumor Problem, Arch. Int. Med. 69:589, 1942.

3. Gunther, M. and Penrose, L. S.: Genetics of Epiloia, J. Genet. 31:413, 1935.

4. Berg, G. and Zachrisson, C. G.: Cystic Lungs of Rare Origin—Tuberous Sclerosis, Acta. radiol. 22:425, 1941.

5. Ross, A. T. and Dickerson, W. W.: Tuberous Sclerosis, Arch. Neurol. & Psychiat. 50:233, 1943.

6. Dawson, J.: Pulmonary Tuberous Sclerosis and Its Relationship to Other Forms of the Disease, Quart. J. Med. 23:113, 1954.

7. Dickey, L. B.: Tuberose (tuberous) Sclerosis

or Epiloia, Stanford M. Bull. 7:74, 1949.

8. De La Cruz, F. F. and LaVeck, G. D.: Tuberous Sclerosis: A Review and Report of Eight Cases, Am. J. Ment. Deficiency 67:369, 1962.

9. Berland, H. I.: Roentgenological Findings in Tuberous Sclerosis; Bone Manifestations, A.M.A. Arch. Neurol. & Psychiat. 69:669, 1953.

10. Hawkins, T. D.: Radiological Bone Changes in Tuberose Sclerosis, Brit. J. Radiol. 32:157, 1959.

11. Dickerson, W. W.: Characteristic Roentgenographic Changes Associated with Tuberous Sclerosis, Arch. Neurol. & Psychiat. 53:199, 1945.

12. MacCarty, Jr., W. C. and Russell, D. G.: Tuberous Sclerosis: Report of a Case with Ependymoma, Radiology 71:833, 1958.

13. Holt, J. F. and Dickerson, W. W.: The Osseous Lesions of Tuberous Sclerosis, Radiology 58:1, 1952.

14. Whitaker, P. H.: Radiological Manifestations in Tuberous Sclerosis, Brit. J. Radiol. 32:152, 1959.

15. Heublein, G. W., Pendergrass, E. P. and Widmann, B. P.: Roentgenographic Findings in the Neurocutaneous Syndromes, Radiology 35:701, 1940.

16. Ackermann, A. J.: Pulmonary and Osseous Manifestations of Tuberous Sclerosis with Some Remarks on their Pathogenesis, Am. J. Roentgenol. 51:315, 1944.

17. Critchley, M. and Earl, C. J. C.: Tuberous Sclerosis and Allied Conditions, Brain 55:311, 1932.

18. Reed, W. B. and Nickel, W. R.: Tuberous Sclerosis, Skin 3:7, 1964.

19. Smith, R. D., III, Sapp, O. L. and Metzger, J. F.: Tuberous Sclerosis: Report of 2 Cases and Brief Review of the Literature, U. S. Armed Forces M. J. 6:417, 1955.

20. Dickerson, W. W. and Hellman, C. D.: Electroencephalographic Study of Patients with Tuberous Sclerosis, Neurology 2:248, 1952.

The Present Status of Radiographic Technique in the Diagnosis of Cardiovascular Disease

Eugene C. Klatte, M.D., Nashville, Tenn.

Twenty years ago the diagnosis of congenital heart disease, rheumatic heart disease, or arteriosclerotic heart disease was considered adequate since the medical profession had little therapeutic measures to offer other than the treatment of congestive failure and general supportive care. Due to the continuing advances in surgical and medical technics it has become increasingly important to accurately determine the type and severity of cardiac lesions so that specific therapy may be instituted. Radiographic technics are rapidly developing to at least in part answer this ever increasing need.

Selective angiocardiography is a valuable addition to our armamentarium. In this technic a small catheter is threaded into a peripheral vein or artery and passed into the various cardiac chambers. Radiopaque materials (iodinated compounds) are then injected and rapid serial radiographs may be obtained as this material circulates through the heart. In recent years the technic of cineradiography (x-ray movies) has been increasingly utilized to record the rapidly occurring anatomic changes during the cardiac cycle.

Not only is it possible to distinguish the complex normal and pathologic anatomy of the interior of the heart, but by watching sequential changes on movies, considerable physiologic information may be gained. Such information as the size, location and direction of intracardiac shunts and the competence of the myocardium during ventricular systole may be ascertained. This information supplements other information such as pressure recordings, dye dilutions, and blood gas studies.

While selective angiocardiography has been utilized primarily in the diagnosis of complex congenital anomalies of the heart, it has proven of considerable value in the complete work-up of patients with rheumatic valvular disease. With radiographic technics it is possible to determine the pathologic anatomy of the deformed valve and semiquantitate the degree of stenotic and insufficiency lesions so that the cardiac surgeon may preoperatively determine the type of valvuloplastic procedure or whether prosthetic valve replacement may be necessary.

By injecting radiopaque material into the base of the aorta or selectively in the coronary vessels, the blood supply to the heart may be accurately outlined. The extent and location of atheromatous lesions may be seen. This technic has been of great value in the work-up of patients with atypical chest pain in determining whether coronary arterial disease is present. This may be of particular value in determination of whether or not to use anticoagulant therapy. An occasional patient may also have a localized atheromatous lesion that may be surgically correctable.

Angiography is also a major diagnostic method in the determination of the type and extent of atheromatous disease of the aorta, carotid arteries and peripheral vessels so that the best form of surgical or medical therapy may be instituted.

In the work-up of patients with hypertension, renal arteriography is the most accurate method we have of diagnosing or excluding renal arterial stenosis as the cause. With improvements in contrast material and percutaneous technics, this can now be performed with minimal morbidity or risk of complications to the patient.

Pulmonary angiography is proving of increasing value, not only in determining the pathologic changes of the pulmonary vasculature in patients with acquired and congenital heart disease, but also in the early diagnosis of pulmonary embolism and the extent or operability of malignant neoplasms.

One working in the field of radiology cannot

(Continued on page 474)

From the Executive Director

TMA MEDICAL DIGEST

News of Interest to Doctors in Tennessee

ABSTRACT OF BOARD OF TRUSTEES ACTIONS
Meeting of October 11, 1964

Highlights of Quarterly Meeting

● Pictures, appropriately framed, of past presidents of the Tennessee Medical Association will be placed in the Conference Room of the TMA Building.
——In confirming mail ballots, the Board approved the use of an educational advertising series sponsored by the American Medical Association, for insertion in newspapers throughout the state and co-sponsored by the Tennessee Medical Association and county medical societies; disapproved of the use of the TMA mailing list for political purposes; and approved the appointment of Dr. J. C. Moore, Dyersburg, to IMPACT's Board of Directors.

National Education Program

● In approving the national education program, the Board heard a report that some 60 daily and weekly newspapers in Tennessee would be used during the weeks of October 11th and 18th. To assist in answering questions from the educational program, the revised brochure outlining medical aid programs available in the State had been reprinted and mailed to all members of TMA.
——Reappointed the auditing firm for the fiscal year 1965.
——Heard a report from TMA's Attorney relative to completion of action for incorporation of the Tennessee Medical Association.

Appeal Before State Tax Equalization Board

● A report was rendered concerning the appeal before the State Tax Equalization Board on TMA property and personalty. An agreement was reached with the Metropolitan Attorney. Under the agreement, the Tennessee Medical Association will be exempted from 85% of its assessment for the headquarters property, equipment and personalty.

Efforts Made to Obtain Additional AMA Membership

● In an effort to qualify Tennessee for an additional AMA delegate, efforts had been made through county medical societies to urge enrollment of those physicians not belonging to the American Medical Association. Tennessee is very near to having the number of active AMA members to qualify Tennessee for an additional delegate.

Nominees Submitted To Blue Shield for Board of Directors

● Upon request of the chairman of IMPACT's Board of Directors, the TMA Board made an allocation of $500 for the balance of 1964 for the educational and administrative activities of IMPACT.
——Approved the use of a suite at AMA meetings for use by TMA's delegates at the clinical and annual sessions of the American Medical Association.

Public Relations Action

● The board heard a report from the Executive Committee of the Board of Trustees dealing with expanded public service

activities. The following recommendation was presented and approved by the Board:

"That the Executive Committee recommends that the Board of Trustees be on record commending the staff of TMA for its public service activities to this time, and that the Board of Trustees, recognizing that future efforts needed will be great, authorizes the staff, with the advice and approval of the Communications and Public Service Committee, to study and consider the need for additional staff or outside assistance."

Proposed Regulations By Internal Revenue Service

● Heard a report on the Internal Revenue Service wherein it has proposed a regulation on associations affecting the tax deductibility for expenditures in connection with legislative activities. The report stated that Associations could be affected if a substantial part of its expenditures are for legislative activities. The report was for information and no action was required.

——Heard a report from Dr. C. D. Hawkes on the Health Careers Committee. The Board appointed Dr. Hawkes as TMA's permanent representative to the Steering Committee of the Tennessee Hospital Education and Resarch Foundation and Dr. Lawrence Cohen of Memphis as alternate representative.

Distinguished Service Awards

● A maximum of three distinguished service awards were approved by the Board to be made at the annual meeting each year. Any member of TMA may submit a nominee for such an award.

Criteria for Distinguished Service Awards

● The Board in establishing the distinguished service awards, set up the following criteria:

Any member of TMA in good standing is eligible for nomination; all nominations should be sent to TMA by January 1, preceding the Annual Meeting; biographical data, medical background, professional history, description of the contribution as basis for the nomination, substantiating material, should be submitted with the nomination.

Finances—Budget

● The Board approved the Third Quarter Financial Statement for 1964.

——The budget for 1965, after several amendments, was approved.

Community Health Week

● The Board heard a report on TMA public service activities relating to Community Health Week. A proclamation was signed by the Governor and each County Medical Society received a complete kit of materials for use during community health week. Publicity in newspapers, on radio and television was used in this promotion.

——Another report stated that the Rural Health Conference, conducted in Jackson, Tennessee on October 1st, was very successful, with 128 participants registered. The conference was sponsored by TMA, the Tennessee Farm Bureau, and UT Extension Service.

Osteopaths

● Since the medical schools in Tennessee had requested a determination relative to osteopaths attending postgraduate courses in Tennessee's medical schools, the Board referred this matter to TMA Council since it dealt with ethical problems.

Other Business

● Heard a report from Dr. Kampmeier on plans for the 1965 annual meeting; Named the Secretary of TMA as official liaison representative with technical exhibitors; Approved a request from the AMA Council on Foods and Nutrition to assist in sponsoring a lecture series to stimulate college students to consider careers in medicine and the biological sciences and to inform the practicing physician of recent developments in clinical nutrition; Approved insertion of four public service ads in the Tennessee Press Association's official publication.

Public Service

THE TENNESSEE TEN

Hadley Williams, Public Service Director

Kerr-Mills Implementation

● Three states—Delaware, Indiana and Rhode Island—have implemented Kerr-Mills legislation for a Medical Aid for the Aged program and, beginning January 1, 1965, a total of 40 states and four territories will have an MAA program in effect. Three other states have enacted legislation establishing an MAA program and are awaiting fund appropriations.

All fifty states have initiated or expanded medical care benefits authorized by Kerr-Mills under Old Age Assistance.

During 1963, $745 million was expended for medical benefits under MAA and OAA programs, an increase of $110 million over the previous year.

TMA Committee Urges MAA Expansions

● The Advisory Committee to the Public Welfare Department has recommended further expansions of the Medical Aid for the Aged program which, if accepted, would mean the sixth expansion of the program since its inception in mid-1961.

The committee, in a recent meeting with Commissioner of Public Welfare Roy S. Nicks, made the following recommendations in the form of a letter from the chairman, Dr. K. M. Kressenberg of Pulaski.

1. Extension of income limits under the MAA program from the present $1,300 for single persons to $1,500 and from $1,800 for married couples to $2,000.
2. Extension of the number of days of hospitalization available from the current maximum of 20 days per year to a total of 30 days during any one year.
3. Addition of a fourth class of services, that of providing dentures. No recommendation was made to include dentist fees which would be made on the same basis as physicians' fees are now.
4. Expansion of the Department's current pilot program of providing hospitals with necessary welfare department forms to as many other hospitals across the state as possible.
5. Amending current regulations regarding medical review officers to permit appointments by hospital staffs.
6. A new program of public information regarding benefits available, eligibility requirements and certification procedures be instigated by the Department to better inform the public of the MAA program.

Commissioner Nicks, in discussing the recommendations with the committee, indicated that every effort would be made to expand the MAA program in the near future.

Legislative Committee Meets, States Program

● The TMA Legislative and Public Policy Committee met in Nashville Sunday, November 8th to discuss legislative plans for the 1965 Tennessee General Assembly which convenes January 4, 1965.

Dr. Tom E. Nesbitt of Nashville, chairman of the committee, announced that physicians across the state are being asked to serve as "contact doctors" during the 84th session with senators and representatives from their hometowns. Plans for publishing a contact doctor legislative manual which would outline the committee's system of keeping legislators informed on all matters pertaining to the health and welfare of our citizens were announced at the committee meeting. The booklet will be mailed to all contact doctors prior to the convening of the General Assembly.

2nd AMA Congress On Mental Health

● The second AMA National Congress on Mental Illness and Health was held in Chicago November 5-7 with approximately 2,000 persons in attendance.

The objective of the Congress was to orient physicians, particularly those in private practice, and interested community leaders toward activating and participating in effective mental health programs at the community level. The main emphasis at the Congress was on the physician, both the psychiatrist and non-psychiatrist, and his role in mobilizing and organizing community mental health services, how he fits into such a network of services, and how he can be encouraged to fill this role.

The format of the Congress was a working meeting with workshops organized on a population basis. Material developed at the Congress is being used to prepare a "Manual on Community Mental Health Programs" to be distributed to physicians and to state and county medical societies.

An excellent film produced by the Nebraska Psychiatric Institute, "Plan Ahead for Mental Health", was shown during the meeting and is available on a rental basis. Outlined in the film are eight basic assumptions regarding community responsibilities in dealing with the mentally ill. They are:

1. Mentally ill persons are human beings but with recognizable disorders. They should never be denied their basic rights.
2. The diagnosis and treatment of mental illness are medical problems but there are also social, psychological and legal problems involved.
3. Persons with mental disorders are treatable and not all treatment needs to be given in mental hospitals.
4. Every mentally ill person must have easy and prompt access to programs and services appropriate to his needs.
5. It should be assumed that a mentally ill person wants treatment unless he actively objects.
6. The human dignity and rights of mentally ill persons must be protected and are as important as any need to protect society.
7. Those who deal with the mentally ill should be presumed to be honestly concerned with the best interests of the patient.
8. The nature of the treatment provided a particular mentally ill person should be based on individual needs—not on such factors as whether or not he was admitted on a voluntary basis or on his ability to pay.

The American Medical Association's mental health program is predicated on two basic principles. One is the importance of psychiatric concepts to all physicians, regardless of their type of practice. The second is the need for adequate mental health services and facilities within the community.

Little Known Facts

● Since 1960, the number of physicians in the U.S. in private practice has increased by 4 per cent and total now 174,974. In the same length of time, the number of physicians not in private practice has increased by 20 per cent to a total of 100,168.

One out of every six hospital patients is 15 years old or younger, according to the Health Insurance Institute, and these children spend an average of six days in the hospital.

Ethical pharmaceutical industry sales totaled $150 million in 1939. Twenty-four years later, in 1963, the industry manufactured and sold more than $2.4 billions worth of ethical products.

Medical care payments under federally aided public assistance programs neared the $1-billion mark in 1963.

Hospital labor costs have jumped 545 per cent since World War II, according to the American Hospital Association.

CASE REPORT

Femoral Hernias in Infants and Young Children

Joe F. Bryant, M.D.,* Lebanon, Tenn.

Femoral hernias in infants and young children are rare. In a cumulative study by Mestel, Farber and Chabon[1], of 6,416 hernias in children, only 29 were femoral. This is an incidence of 4.5 per 1,000. A femoral hernia is much more frequent in the 6 to 15 age group than in the 1 to 5 years age group. Owens, Kirklin and DuShane[2] reviewed the operative cases at the Mayo Clinic for a ten year period from 1941 through 1950 and found one femoral hernia among 220 hernias of the groin in children 5 years of age or less. The youngest infant reported with femoral hernia is a 9 week old girl.

Anatomy and Pathology

A femoral hernia passes through the femoral ring and down the femoral canal to become subcutaneous in the fossa ovalis. It is a third variety of an inguinal hernia. The femoral canal is conical and measures about 1.25 cms. in length; its base is directed upward, the femoral ring. It is oval in form and its long diameter being directed transversely and measuring 1.25 cm. The femoral ring is bounded in front by the inguinal ligament, behind by the pectineus covered by the pectineal fascia, by the fibrous septum on the medial side of the femoral vein.[3]

While the anatomy texts state that the medial margin of the femoral ring is the lacunar ligament, and that in a case of femoral hernia the medial margin of the constricting ring lies against the lacunar ligament, this is a pathologic state. It is also true that the lacunar and inguinal ligaments when stretched by a femoral hernia, limit the size of the ring and contribute to the rigidity of the rings. However, they are part of a secondary and more superficial ring as can be nicely demonstrated when the inguinal ligament must be cut to release a femoral hernia. The inner constricting ring is the dilated true femoral ring, which is the transversalis facia at the point where it becomes femoral sheath, reenforced by transversus abdominis aponeurotic fibers of the posterior inguinal wall en-route to their insertion into Cooper's ligament.[4]

Etiology and Diagnosis

There has been much disagreement as to whether or not femoral hernias can be congenital in origin. Shepler and Smith[5], with their report of a 9 week old infant, have proof that they can be congenital. Murray[6] found 52 femoral diverticula in 200 consecutive necropsies. Watson believes that predisposing factors are the presence of a preformed sac or prominence of a peritoneal depression due to a lack of fat. He also cites the absence of the lymph gland of Rosenmuller, a large saphenous opening or a large compressible femoral vein as possible predisposing factors. Practically all of the case reports relate a negative maternal history, but there is no mention of the paternal history. In this case the father has multiple sclerosis.

The diagnosis usually is not difficult in children if one will only be aware that femoral hernias do occur in infants and children. An exception is when there is a question of incarceration versus an inflammatory node. On routine physical examination all children and infants should be checked for femoral hernias as well as for other inguinal hernias.

Treatment

Repair of true femoral hernias is indicated in infants and children. A transverse incision is made in the lower most fold of the skin of the groin. The aponeurosis of the external oblique muscle of the abdomen is opened through the external ring. The spermatic cord is not mobilized but is displaced enough so the transversalis fascia of the posterior wall of the inguinal canal is exposed. This is incised over the femoral hernia. The sac is then teased out from under the inguinal ligament and opened. A high ligation of the peritoneal sac is performed. The repair is carried out by suturing the transversalis fascia to Cooper's ligament out to the femoral vein.[2]

CASE REPORT: A 5 year old white boy was seen for the first time on July 28, 1964 for a hernia on the right side. The child was from a normal delivery and developed normally. When the baby was approximately 9 months old a hernia was

*From the McFarland Hospital, Lebanon, Tenn.

found in the right groin by a physician. The mother was told of the finding but operation was not advised. The hernia had been relatively asymptomatic except that it would swell when the patient stood. The past history was negative for any precipitating etiology such as a cold with cough. (It is of interest that the boy's father has multiple sclerosis.)

Physical examination was normal except for a 3 cm. sized reducible bulge below the right inguinal ligament. A diagnosis of femoral hernia was made and the child was operated upon on August 7. The incision made was as routine for an inguinal hernia. The external facia was opened and a hernial sac 5 cm. in greatest length was found protruding from the femoral canal. The neck was 2 cm. in diameter. The transversalis fascia was incised and the sac teased from beneath the inguinal ligament as shown in figure 1. The sac was opened and no contents were found.

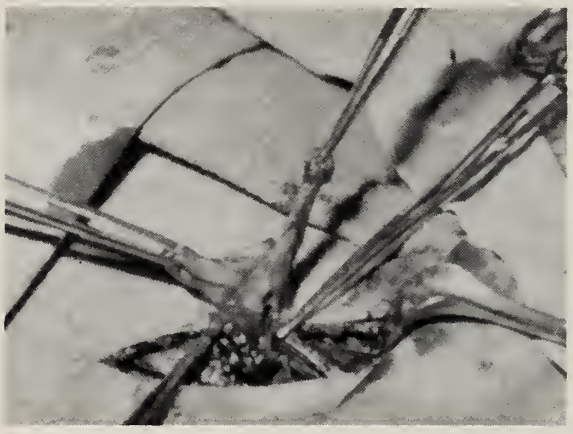


FIG. 1.

The sac was ligated at its base and excised. The hernial opening was repaired by approximating Cooper's ligament to the inguinal ligament with two silk sutures.

I do not believe it is absolutely necessary to suture the transversalis fascia to Cooper's ligament in every case. In this particular incidence this was the most physiologic repair. The patient had an uneventful postoperative course.

Summary

1. Femoral hernias are rare in children but they definitely can occur in a congenital form.

2. The anatomy, pathology and etiology are reviewed.

3. A case report of a femoral hernia in a 5 year old child is presented that had been found at 9 months of age.

References

1. Mestel, A. L. et al: Femoral Hernias in Infancy and Childhood, AMA Arch. Surg. 64:750, 1960.

2. Owen, H. W., Kirklin, J. W., and DuShane, J. E.: Femoral Hernias in Infants and Young Children, Surgery 283, 1954.

3. Gray's Anatomy: 25th edition p. 631-632.

4. McVay, Chester B.: Hernia p. 29-31, 1954.

5. Shepler, N. B., and Smith, C. W.: Femoral Hernia in Infancy, Am. J. Surg., 49:375, 1940.

6. Murray, R. W.: Is the Sac of A Femoral Hernia of Congenital Origin, or Acquired? Ann. Surg. 52:668, 1910.

PRESENT STATUS OF RADIOGRAPHIC . . .

(Continued from page 472)

help but point with pride at past accomplishments and the present status of the art, but by future standards, our methods will be considered crude, and there is an ever increasing need for refinements of present techniques and development of new ones so that the diagnostic needs of the rapidly developing field of medicine may be met. Department of Radiology, Vanderbilt University School of Medicine. *Prepared for the Middle Tennessee Heart Association.*

CLINICOPATHOLOGIC CONFERENCE

Vanderbilt University Hospital*

Primary Amyloidosis with particular involvement of the heart, lungs, and blood vessels; Cholangiolitis with minimal diffuse hepatic portal fibrosis; Generalized lymphoid hyperplasia and plasmacytosis

(VUH No. 361885) A 67 year old negro farmer was admitted for the third and last time on March 28, 1963 complaining of shortness of breath, increasing edema and infection of the right leg.

History. The patient had been followed at Vanderbilt University Hospital since Jan. 20, 1961. When first seen, he gave a history of 2 years of slowly increasing dyspnea, orthopnea, paroxysmal noctural dyspnea, wheezing, productive cough, increasing abdominal girth, nocturnal frequency and dependent edema. There was no history of chest pain, hemoptysis, fever, arthritis, jaundice, hypertension, rheumatic fever or heart murmurs. His past history included treatment for syphilis, symptoms of duodenal ulcer for many years, and prostatism. he was a nondrinker. His family history was obscure.

Over the 2 years that he was followed at Vanderbilt University Hospital he was admitted on two occasions. The first from Jan. 27 to March 1, 1961 was for evaluation of his underlying disease and the EKG findings of PAT with 2:1 block, PCV's, low voltage and nonspecific ST-T wave changes and a ventricular rate of 110. He had been receiving digitalis and diuretics as an outpatient. His course was complicated by massive bleeding from a posterior duodenal ulcer, necessitating transfusion with 12 units of blood and a gastrojejunostomy and vagotomy.

His second admission from April 24 to May 12, 1961 was for jaundice. A liver biopsy at that time showed cholangiolitis with interlobular bile stasis. The physical findings on each admission included a normal temperature, B.P. ranging from 110/70 to 130/85, P. varying from 70 to 76 with an irregular rhythm, and no documented paradoxical pulse. He was dyspneic, orthopneic and showed dependent edema and ascites. The skin was dry, rough and scaling. The neck veins were distended and a positive Kussmaul's sign was observed. Rales were present in the lungs and there was dullness at the bases. Cardiac findings included marked cardiomegaly, an intermittent gallop rhythm, and increased, split P2 and no murmurs. The liver was large and the spleen was not felt.

Following his second admission he was followed in the clinic. He was treated with digitoxin, low salt diet and diuretics including mercaptomerin, chlorothiazide, hydrochlorothiazide and spironolactone. He did well except for a complaint of hoarseness until 2 months before admission when a generalized puritic rash, variously described as eczematoid, dry, scaling and leather-like appeared. Shortness of breath and edema had increased 3 weeks before admission. Cellulitis of the right lower leg developed several days PTA.

Examination: B.P. was 105/60, P. 100 R. 24, and T. 104° F. In addition to acute cellulitis of the right lower leg, the findings were similar to the examination of previous admissions.

Laboratory Studies: The PCV. was 35% Hgb. 10.5 gm. per 100 ml., WBC. count 13,900 with a shift to the left. The ESR was 55/32; platelets were adequate on peripheral smear. The stool was guaic 2+. Urinalysis revealed a specific gravity of 1.020, pH of 5.0, 2+ proteinuria, and no sugar. Cultures from the leg were positive for beta streptococcus. Blood cultures were negative. Sputum cultures routine and for acid-fast bacilli revealed no organism. BUN was 28 mg. per 100 ml., sodium 134, potassium 6.0 and chlorides 106 MEQ/L. CO_2 was 22.5 vol%. A/G ratio was 3.215.3 Gm. with a gamma globulin of 32% and a broad electrophoretic peak. Fasting blood sugar was 124 and 100 mg.; SGOT 58 units, alkaline phosphatase 7.0 Bodansky units, cholesterol 140 mg., bilirubin 1.5 mg. total with 0.6 mg. direct reacting. BSP was 29%. The Wasserman was 3+, VDRL negative. Prothrombin time was normal. Bone marrow aspiration revealed 2.4% plasma cells and 21% lymphocytes with iron present 2+ on iron stains. EKG's showed a rate of 90 per minute auricular fibrillation with PVC's, ST-T changes and low R V_1-V_3. Chest film showed pulmonary congestion and cardiomegaly. Cardiac catheterization R.A. V=18-20 mm. Hg., Y=7 mm. Hg., diastolic plateau = 18 mm. Hg., mean = 18 mm. Hg.; R.V. 44-55/7 rising to 18 (plateau) mm. Hg.; L.A. V=28-37 mm. Hg., Y=10-13 mm. Hg., (expiration). Femoral artery pressure 107-128/63-73 mm. Hg. Indicator dye dilution C.O.P. after L.A. injection = 2.7 L/min. There was no evidence of tricuspid insufficiency.

Course: The patient was treated with penicillin for the cellulitis with a prompt response. Cardiac catheterization revealed the above data. The evening after catheterization he complained of mild shortness of breath. He was found dead in bed at 4:00 A.M. the following morning.

DR. LAWRENCE K. WOLFE: The patient presents an interesting and difficult diagnostic problem. Briefly, this patient's major findings are those of unexplained heart failure, liver disease and generalized itching.

The first and most obvious is heart disease. There were findings of both left and right heart failure progressing over a 4

*From the Departments of Medicine and Pathology, Vanderbilt University Hospital, Nashville, Tennessee

year period, without chest pain or typical angina. Also present with digitalis sensitivity, atrial fribrillation, a large heart with enlargement of the several chambers and absence of murmurs or calcification of the pericardium. The second enigma which must be explained is liver disease manifested by jaundice, ascites, hepatomegaly and abnormal liver function tests. Lastly, this patient had skin involvement manifested by generalized pruritus. One would like to try to tie all of these findings into one diagnosis.

Congestive heart failure is a manifestation of heart disease, not a diagnosis. The three most common causes of heart disease are arteriosclerosis, hypertension, and rheumatic fever. This patient never had chest pain, a positive family history, angina, peripheral manifestations of arteriosclerosis, nor electrocardiographic evidence of a definite myocardial infarction. In the absence of these cardinal signs and symptoms of arteriosclerosis, one is never justified in making this diagnosis. The patient was never hypertensive throughout the time he was followed; no murmurs were ever described, and no valvular lesions were found on cardiac catheterization. Therefore, I believe hypertensive or valvular heart disease can also be excluded.

Other causes of heart failure which must be considered are primary pulmonary disease leading to congestive heart failure, congenital heart disease, bacterial endocarditis, and thyrotoxic heart disease. There is no evidence for any of these diagnoses. Syphilitic heart disease in the absence of aortic aneurysm or aortic insufficiency is unlikely. The major possibilities then lie between constrictive pericarditis and restrictive infiltrative or inflammatory disease of the myocardium (primary myocardopathy or myocarditis).

The diagnosis of constrictive pericarditis is fairly easy to make in a patient with a previous history of tuberculosis, with physical signs of restriction to diastolic filling such as paradoxical elevation of neck veins with inspiration (Kussmaul's sign), paradoxical pulse, a quiet heart, low pulse pressure, ascites, and calcification of the pericardium on the chest film. However, in the absence of pericardial calcification (which occurs in only 50% of cases), all of the clinical signs of constriction can be simulated by restrictive or infiltrative cardiopathies. Some authorities think that noncalcific constrictive pericarditis can only be excluded by thoracotomy and believe there are no special technics, including cardiac catheterization, which will differentiate restriction from constrictive cardiac disease. The catheterization data in this case are compatible with constrictive or restrictive heart disease. The characteristic "plateauing" of the diastolic pressure found in this case is caused by a ventricle which cannot expand. The literature is replete with instances of thoracotomy because of the suspicion of constrictive pericarditis in cases of subendocardial fibroelastosis, amyloid and other cardiomyopathies. In the case presented here one cannot exclude constrictive pericarditis, but this diagnosis does not explain the other organ involvement.

The list of causes of obscure cardiomyopathies and myocarditis is quite long and includes some 60 disease processes which can cause cardiac involvement. From this group the best possibilities include infectious myocarditis, sarcoidosis, hemochromatosis, amyloidosis, "collagen disease", tumor, and a large group which can be called "idiopathic".

At this point one might want to consider the etiology of this patient's liver disease. Could this be the liver disease of congestive heart failure? According to Dr. Sherlock,[1] the abnormalities of liver function in chronic passive congestion include mild hypercholesteremia, mild elevation of alkaline phosphotase and BSP retention. This patient's abnormalities in liver function certainly could be due to congestive heart failure. Usually liver function improves as congestive heart failure lessens, and in this case the reverse was true. However, the liver biopsy should be diagnostic, and in this patient, probably to the surprise of everyone, a microscopic picture of biliary obstruction was seen.

Cholangiolitic viral hepatitis is also a possibility. However, there are usually symptoms of malaise, f e v e r, and particularly pruritis. This is usually a short-term illness and postnecrotic cirrhosis is quite rare.

Drug cholangiolitis also could give this

picture. However, the patient was not receiving a phenothiazine drug or androgens, the most notable offenders. A few cases of cholangiolitic jaundice induced by hydrochlorthiazide have been described. This patient's jaundice cleared spontaneously while receiving this drug.

Extrahepatic obstruction with stone, tumor, or stricture could also explain the biopsy findings. No mention is made of gallstones at the time of laparotomy, however, and the jaundice cleared rather rapidly which might exclude tumor as a possibility.

Pulmonary embolism can cause jaundice along the right heart failure. There is nothing clinically to suggest this diagnosis, although any patient with chronic congestive heart failure is a likely candidate for pulmonary thromboembolic complications.

Infiltrative disease of the liver with tumor or other substances characteristically cause elevations of the alkaline phosphatase and BSP retention. I will comment further on this possibility later.

The final symptom of which this patient complained was itching. Several systemic diseases are brought to mind by generalized pruritus. Liver disease, particularly biliary cirrhosis, frequently begins with this symptom. The patient had none of the other clinical or chemical findings of this syndrome such as xanthomas or steatorrhea. Other systemic diseases include renal disease with azotemia, occasionally diabetes mellitus, thyroid disorders, Hodgkins disease, polycythemia vera and infiltrative skin diseases with tumor or other substances such as sarcoid or amyloid.

The most likely diagnosis which will fit this man's illness then probably represents an infiltrative disease which involves many organ systems. The three which are most likely are sarcoid, hemochromatosis, and amyloidosis. I believe that viral myocarditis, collagen disease and tumor infiltration can all be excluded by the length of his course and lack of other primary involvement.

Aspects against the diagnosis of sarcoidosis are the absence of lymphadenopathy, the rarity of cardiac involvement until late in the disease, the absence of a granuloma on liver biopsy, and the fact that the skin lesions are usually nodular.

In hemochromatosis the presenting manifestation is usually liver disease; the diabetes is usually severe, and there is frequently gonadal atrophy. Iron stains of the marrow are most often quite heavy instead of only 2+ as was the finding here.

I believe the most plausible diagnosis is primary amyloidosis to explain the involvement of the heart, liver, and skin. One might question the diagnosis of primary amyloid in reference to this patient's liver disease since frequently it is said that only secondary amyloid involves the liver. In a recent review of amyloidosis of the liver, 62% of patients with primary amyloid had hepatic lesions compared to 59% with secondary amyloid. Exclusive vascular deposition was more common, however, in primary amyloid. Abnormalities in liver function included BSP retention and elevations of alkaline phosphatase, globulin and bilirubin. Bile stasis was described on liver biopsy of one of the patients presented in this review.

Amyloid heart disease is usually the most important manifestation of amyloidosis. Forty to 90% of cases of amyloid, either primary or secondary, have cardiac involvement. This may be diffuse or focal, pericardial, myocardial, endocardial or valvular. The most common clinical findings are intractable congestive heart failure; a syndrome of constrictive pericarditis-like picture with the cardinal signs previously discussed of electrocardiograph abnormalities, including low voltage, loss of precordial R waves, low T waves, and arrhythmias; and marked digitalis sensitivity.

Skin lesions are present in about 20% to 50% of cases. Deposits may be in the subcutaneous tissues, in the walls of dermal blood vessels, and in subcutaneous adipose tissue. Pruritis, ecchymoses, and purpura are commonly seen.

Other facets of this disease might also be explained by amyloidosis. The hoarseness might have been a manifestation of amyloid involvement of the larynx which occurs not infrequently. Vascular involvement of the gastrointestinal tract is common, which might account for the sclerotic, bleeding vessel in the duodenum. Consistent pro-

teinuria could have been explained either on congestive heart failure or amyloid nephropathy. It is interesting to note the plasmacytosis present on aspiration of the bone marrow. Kyle and Bayrd[3] reported 44 patients with primary amyloidosis in which the bone marrow was abnormal. In 23 of these a diagnosis of myeloma could be made, and in 21 the plasma cells were abnormal. They thought that primary amyloidosis is a plasma cell disease and that it is impossible to distinguish from myeloma with technics now available.

Traditionally, amyloidosis has been divided into (1) primary, (2) secondary to chronic diseases such as suppurative lung disease, rheumatoid arthritis, or Hodgkins disease, (3) tumor forming, and (4) amyloid of multiple myeloma. Each of these were thought to have specific organ involvement. There is ample evidence, however, that there is a great overlap between these forms and this classification of primary versus secondary is not meaningful.

The evidence then points to my final diagnosis of primary amyloidosis with involvement of the heart, liver, skin, gastrointestinal tract, larynx, and possibly kidneys, and I wonder about the possibility of underlying multiple myeloma.

DR. JACK FREEMAN: At autopsy, the neck veins were quite distended as evidence of the congestive heart failure described clinically. The skin was thickened and scaly with numerous small excoriations and associated depigmented areas. Large confluent lymph nodes measuring 2 cm. in diameter were palpable in the axillary and inguinal areas. The peritoneal cavity contained 100 cc. of clear fluid and the same amount was present in each of the pleural cavities. Although the liver edge was palpable 5 cm. below the right costal margin, the liver was not enlarged (1,200 grams). The domes of the diaphragm were flattened and were at the level of the 5th rib. The gastrojejunostomy site was intact, with no evidence of leakage. The mesenteric lymph nodes were enlarged. The lungs were well expanded with widely scattered fibrous adhesions. The pericardium was not remarkable. The heart was markedly enlarged in sites and weighed 850 grams. The right atrium and ventricle were dilated and the wall of the left ventricle was moderately thickened. The coronary arteries were wide open throughout their course with no evidence of recent or remote occlusion. The valves of the heart were not remarkable. There was no gross or microscopic evidence of leutic involvement of the heart or aorta. On cut sections of the myocardium, multiple gray, translucent miliary nodules were present and were thought to represent deposits of amyloid. H & E sections revealed a striking loss of normal muscle with scattered focal, nodular accumulations of acidophilic, hyaline-like material. Crystal violet stains showed amyloid almost completely replacing the muscle fibers (Fig. 1). It is estimated that 75% of

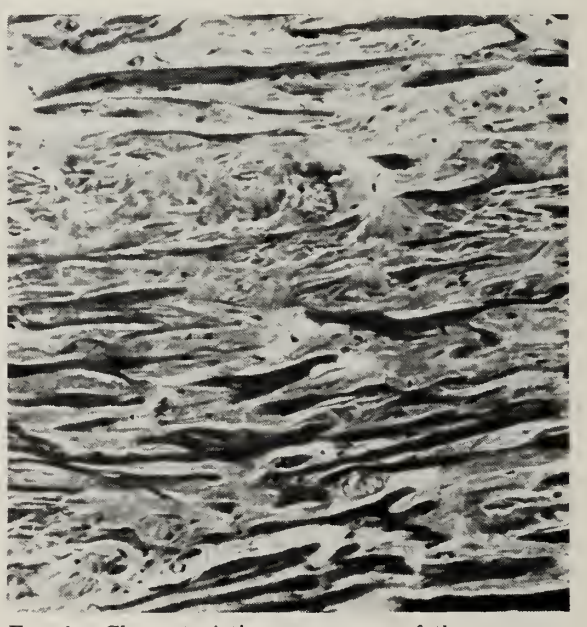


FIG. 1. Characteristic appearance of the myocardium. The darker staining areas are atrophic myocardial fibers separated by masses of amyloid. (H & E x300)

the myocardium was replaced by amyloid.

The lungs showed focal accumulations of eosinophilic hyalin-like material which stained metachromatically with cresyl violet. This deposit was seen predominantly in the walls of the vessels but was present in the interstitium as well (Fig. 2). The pulmonary vessels showed some thickening of the walls and would be compatible with some degree of pulmonary hypertension.

The liver at autopsy did not show the bile stasis seen in the surgical pathology specimen. There was a cholangiolitis, minimal portal and early centrilobular fibrosis

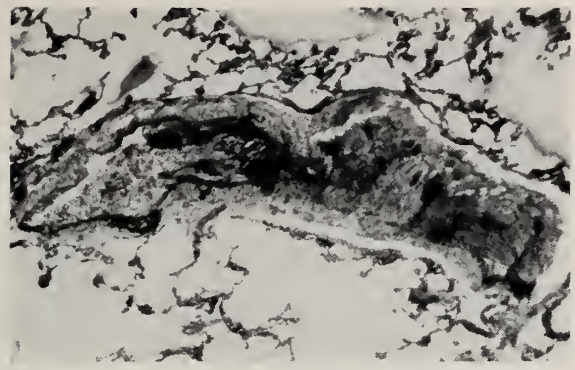


FIG. 2. Section of a pulmonary artery. The dark areas in the vessel are amyloid deposits. Some amyloid material is present in the interstitium. (cresyl violet stain x275)

with a prominent chronic inflammatory cell infiltrate. Neither the autopsy nor the surgical pathology sections showed amyloid deposition.

A representative section of the bone marrow showed well preserved spicules and a normal cellular marrow without an increased number of plasma cells. The enlarged lymph nodes showed in addition to lymphoid hyperplasia, many foci of mature plasma cells in the sinusoids and connective tissue septae (Fig. 3).

The skin lesion of this patient is of some interest. An "eczematoid rash" was present and is occasionally described in generalized amyloidosis. In the cutaneous manifestations of amyloidosis, material may be deposited either in the rete papillae and corium, or in the subcutaneous fat and vessels.[4,5] In the present case amyloid-staining material was present in the subcutaneous fat and situated in a pericellular position (Fig. 4). In addition there was a chronic inflammatory cell infiltrate of the corium.

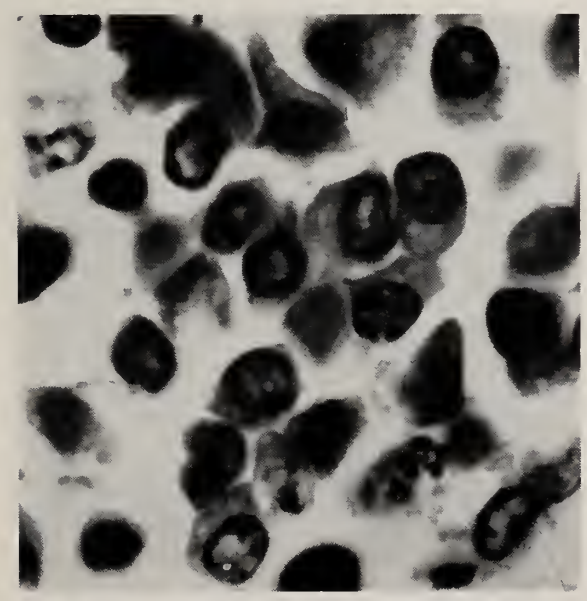


FIG. 3. Plasma cells in a para-aortic lymph node. Similar aggregates of plasma cells were seen in the lymph nodes from many different sites. (H & E x1125)

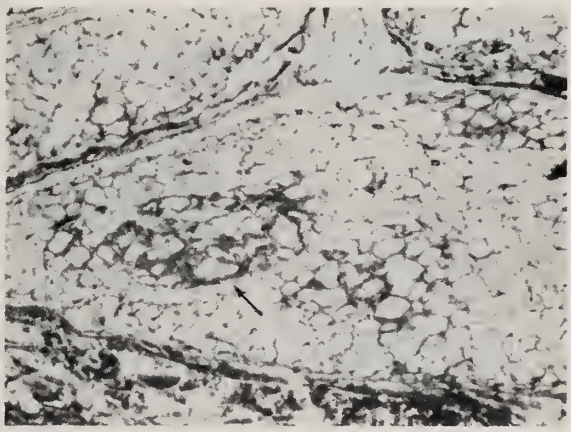


FIG. 4. Subcutaneous fat. The arrow indicates amyloid deposits. (H & E x275)

The brain was not remarkable, either grossly or microscopically. No stainable amyloid was present in any of the sections.

In summary, this patient represents a case of *primary amyloidosis,* "primary" in the sense there appears to have been no associated underlying disease. The distribution of the amyloid deposits is that commonly described in primary amyloidosis.

References

1. Sherlock, S.: Diseases of the Liver and Biliary System, 2nd Ed., Springfield, Ill., C. C. Thomas, Publisher, 1958.

2. Levine, R. A.: Amyloid Disease of the Liver, Am. J. Med. 33: 349, 1962.

3. Kyle, R. A. and Bayrd, E. D.: "Primary" Systemic Amyloidosis and Myeloma, Arch. Int. Med. 107: 344, 1961.

4. Briggs, Gordon W.: Amyloidosis, Ann. Int. Med. 55:943, 1955.

5. Goltz, R. W.: Systemized Amyloidosis: A Review of the Skin and Mucous Membrane Lesions and Report of Two Cases, Medicine 31: 381, 1952.

President's Page



Dr. Kampmeier

Only some 15 years ago the activities of TMA were based in a small office in the Doctors Building, and in the hands of the recently appointed Executive Secretary aided by two secretaries. The decade had just ended in which doctors could become nonchalant in the face of pneumonia, peritonitis, and osteomyelitis. Laymen no longer needed to sit out the horrible, lonely vigils as young fathers or mothers praying that medicine's limited support to the body's natural resistance would save for them a spouse or a child.

The times were to bring new advances in medical care and the extension of life which in two decades was to move the average age of the medical patient from 35 to 55 years. Now laymen were to face the costs of diagnosis, treatment and hospitalization of the chronically ill or disabled who had survived acute disease with the aid of modern medicine. There evolved a host of third party mechanisms to aid in the costs of illness. There appeared militant moves to push these forward. There eventually developed the philosophy of aid over and above a third party to which the consumer had contributed—a philosophy of "let someone else pay the cost of medical care," urged on by the fact that health is a community good. All of these caught up hospitals, paramedical persons and doctors in their meshes.

Fifteen years ago, the TMA thought only of its postgraduate efforts through its Journal, the Annual Sessions and the circuit riding courses. Less than a dozen committees dealt with disease, postgraduate education and interprofessional relationships.

Today jarred out of a preoccupation with disease and its treatment, the TMA has needed to spread its activities and thoughts over an ever-widening arena to meet the threats to adequate medical care and that basic essential, *doctor-patient relationship,* the essence of free medicine which begs for comparisons with the medicine of the European countries. No longer can a staff of two meet the burden of daily mail and telephone calls which tax even a staff of seven. No longer can 8 committees with a total of 40 members reflect the thoughts of the doctors of Tennessee. They now number 30, engaging more than 100 members of the Association, to deal with legislation, health insurance, third party contracts, welfare agencies, public relations, problems of aging, in addition to expanding health activities and interprofessional relationships. The Association can operate only on a committee substructure and the members of TMA should have an appreciation for the hours spent, all too commonly away from home on a Sunday, by those dedicated colleagues who make this contribution.

Committee assignments are not to be accepted lightly. The Officers of the Association have been distressed by the unusual absenteeism of some committeemen during the current year. It is not fair to the members of TMA to have important committees, meeting with a bare quorum, take actions which may influence policy of almost 3000 doctors. The Association cannot function without its committees. As new committeemen are appointed in coming months it is our hope that in accepting an appointment the member does so with such dedicated interest that only an unforeseen demand will keep him away from the committee meeting.

President

I Wish For All of You and Your Loved Ones a Merry Christmas and A Happy 1965.

THE JOURNAL
OF THE
TENNESSEE MEDICAL ASSOCIATION
Published Monthly
Devoted to the Interests of the Medical Profession of Tennessee
Office of Publication, 112 Louise Avenue, Nashville 5, Tenn.

Acceptance for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized July 15, 1932.

Copyright for protection against republication. Journals of the American Medical Association and of other state medical associations may feel free to quote from this Journal whenever they desire merely giving credit to this publication.

Address papers, discussions and scientific matter to R. H. Kampmeier, M.D., Editor, B-4211 Vanderbilt University Hospital, Nashville 12, Tennessee
Address organizational matters to Jack E. Ballentine, Executive Director, 112 Louise Avenue, Nashville 5, Tenn.

R. H. KAMPMEIER, M.D., Editor
Vanderbilt University, School of Medicine, Nashville, Tenn.

ADDISON B. SCOVILLE, JR., M.D., Assistant Editor
2104 West End Ave., Nashville, Tenn.

COMMITTEE ON SCIENTIFIC WORK AND POST GRADUATE EDUCATION
R. H. Kampmeier, M.D., Chairman
W. Powell Hutcherson, M.D., Chattanooga
Robert P. McBurney, M.D., Memphis
Eugene J. Spiotta, M.D., Memphis
(Specialty Society Representatives to be named)

DECEMBER, 1964

EDITORIAL

DISABILITY

Disability is the result of disease; remove the disease and further disability from it also disappears. This is the aphorism each physician learns because until recently the medical school's curriculum bore the indelible imprint of pathologic anatomy. A. H. Hirschfeld[1] discusses this subject in a recent issue of the Bulletin of the New York Academy of Medicine.

Disability is not necessarily described by disease even in certain cases where the disease is severe. Poliomyelitis, for example, certainly can cause disability. Some victims of polio, as a result of the disease, cannot stand or walk. That this patient is disabled is noncontroversial; the Veterans Administration, the Workman's Compensation Court or any insurance company, all would say he is disabled. But another man with this history became President of the United States.

Or take a different example. Years of study of both gross and microscopic anatomy of the brain have accurately described the process of senility. The remorseless deterioration of Betz cells in patients suffering from this disorder can be detected with the electroencephalograph. Yet Busse,[2] at Duke, examined a large series of older people working regularly and who were not patients, and found 51% of the electroencephalograms so abnormal that they might have been certified for commitment had they been seen as patients. Certainly they had somatic change. What is the disability here?

Finally, dementia praecox was originally described as being definitive of complete and permanent disability. It was later renamed schizophrenia to get away from this idea and the term now implies complete disability only when acute. However, some patients with this disorder, although actively hallucinating and delusional, may work every day.

Everyone knows about disability which is not disease. In our society disability may mean that a man has passed 65. In almost every school and university in this country this age automatically stops a man from teaching. He may become emeritus and do research, but contact with students must cease.

The individual who has left school before his 18th birthday is prevented by Workman's Compensation laws and by unions from working. This man is disabled by youth. A social-minded police commissioner in Detroit made a survey of high school graduates, not drop-outs; of those out of school three years 43% never had a job! We need not stop with the old or the young. A man is disabled if he has a family, lives in "Appalachia," and has no money to move. Many people have low IQ's and cannot see opportunities even when they are present. Sometimes disability is just a skin color.

There are also job-centered disabilities. Some workers develop defective backs. If their job entails lifting, they can be disabled by a company policy which will not permit the changing of workers' assignments. In like manner, after being employed for 30 years by a company that goes bankrupt, a 53 year old man may wonder

who will hire him. He is in effect disabled. Or, he may be replaced by a machine in a factory that has become automated. Here he is disabled by a machine he has never seen.

Thus, disability may be caused by other than disease; ergo, treatment of subsequent disease will not affect this type of disability at all.

Finally, disability may cause disease: through anxiety and depression over disability, one may develop disease. People who are discarded and useless become depressed. Depression produces sharp changes in the endocrine system and the cardiovascular apparatus, in fact, in the whole organism.

Even more dramatic than depression is anxiety. Anxiety prepares a man to fight or flee. For this he needs fast movement and fast thinking. His heart speeds up, delivering more oxygen to the brain and to the voluntary muscles. Adrenalin and sugar increase in the blood. In fact, the entire endocrine apparatus reacts in the fashion described by Selye. On the other hand, the digestive and eliminative functions are useless for combat, so they may empty,—urinary urgency and diarrhea. Or they may just suddenly become inactive—sphincter paralysis and constipation.

The physician is well advised to perform those studies necessary to carefully evaluate the patient's symptoms. However, the clinician cannot ignore his obligation to know the normal physical components of anxiety and depression. All physicians, particularly those engaged in occupational medicine, must be able to diagnose and treat disability in addition to knowing how to deal effectively with disease.

As scientific medicine progresses and as laboratory medicine increases in stature, it is important that each physician consider disability in its modern concept:—not as the result of disease, not necessarily in our broadened philosophic concept as the result of nondisease, but frequently as a very important mechanism responsible for disease.

A. B. S.

References

1. Hirschfeld, A. H.: Some Thoughts on Disability, Bull. New York Acad. Med. 40:532, 1964.

2. Busse, E. W., Barnes, R. H., Friedman, E. L. and Kelty, E. I.: Psychological Functioning of Aged Individuals With Normal and Abnormal Electroencephalograms. I. Study of Nonhospitalized Community Volunteers, J. Nerv. & Ment. Dis. 124:135, 1956.

DEATHS

Dr. A. B. Qualls, 80, Livingston, died October 6th at his home.

Dr. John W. Oursler, 78, Humboldt, died October 2nd at Veterans Hospital in Jackson, Mississippi.

Dr. W. F. Fessey, 79, Nashville, died October 30th.

Dr. Harry Schmeisser, 79 Memphis, died October 13th at Baptist Hospital.

Dr. Wm. H. Gardner, 41, Knoxville, died October 9th at Fort Sanders Presbyterian Hospital.

PROGRAMS AND NEWS OF MEDICAL SOCIETIES

Knoxville Academy of Medicine

A panel discussion on Community Mental health and Medical Practice was presented by the Mental Health Center at the October 13th meeting of the Academy. Dr. Robert Gentry introduced the participants, who were Louise J. Noel, M.D., Acting Director; Zachary Mayberry, Ph.D., Chief Psychologist; and Laurence H. Gangaware, M.S.W., Chief Psychiatric Social Worker. The meeting was held in the Academy of Medicine Building.

Roane-Anderson County Medical Society

The annual Dwight Clark Memorial Lecture was presented on October 27th. Dr. Douglas Buchanan, Professor of Neurology and Pediatrics, University of Chicago, was speaker. His subject was "Neurology and History With Some Observations on the Liver, Spleen, Adrenals and the Brain".

Members and their wives and guests attended the social hour and dinner in the cafeteria of the Oak Ridge Hospital.

Memphis-Shelby County Medical Society

The Society met in regular session in the auditorium of the Institure of Pathology on November 10th. Guest speaker was Mr. D. George Sullivan, Executive Vice-President of the Fidelity Group of Funds and Chairman of the Board, Investment Companies Institute, Boston, Massachusetts.

His topic was "Modern Investment Techniques."

Warren County Medical Society

A paper entitled, "Surgery of Peptic Ulcer" was given by Dr. J. C. Gaw, McMinnville Surgeon, at a recent meeting of the Warren County Medical Society held at the Hillcrest Restaurant in McMinnville.

NATIONAL NEWS

The Month in Washington

(From the Washington Office, AMA)

The Johnson Administration has placed so-called medicare at the top of its legislative program for 1965.

In a policy paper issued a few days before the national elections, President Johnson said: "First we must provide adequate hospital and nursing home care for our senior citizens by a sound program financed through contributory social insurance. I pledge that the legislation to accomplish this will head my program next year".

Administration forces in Congress expressed confidence that most of Johnson's legislative program would be approved next year in light of the Democratic victory in the elections. Democrats gained a net of 37 seats in the House.

The Administration was reported to be considering a program that would be financed by a separate employer-employe tax rather than an increase in the social security tax as called for in legislation that died in a House-Senate conference committee when Congress adjourned in October.

In reiterating his opposition to social security financing, Rep. Wilbur D. Mills (D., Ark.), chairman of the Ways and Means Committee, said just prior to adjournment: "I think one of the difficulties that has actually impeded the reaching of a sound solution is the insistence by the proponents of medical care on proceeding toward a solution through the existing OASDI (Social Security) system rather than in an all-out effort to solve the problem itself with some flexibility in their approach. In other words, there may well be within our reach solutions to the admittedly difficult and increasing problems of medical care for the aged which lie outside of attaching a Federal program to the framework of the OASDI insurance system. I would be hopeful that the basic prepayment concept might lead us in the direction of sound approaches to this matter. There are other principles which we can embody to insure a sound medical program while at the same time preserving our basic social security insurance system."

Other points listed in Johnson's policy paper on health were:

"Second, we must step up the fight on mental health and mental retardation. I intend to ask for increased funds for research centers, for special teacher training, and for helping coordinated state and local programs.

"Third, we must expand our program to help train the doctors, dentists and technicians this nation desperately needs. Right now, the statistics show that we are importing interns and resident physicians from other countries which can ill afford to lose them.

"Fourth, we must enlarge programs to help disabled citizens rehabilitate themselves for useful employment.

"Fifth, we must increase existing programs of medical assistance to children of low-income families.

"Sixth, we must work to correct the deficiencies of young men who are rejected for military service because of health.

"Seventh, we must move ahead in the effort to protect the purity of the water we drink and the air we breath. Air pollution, according to one estimate, causes $11 billion damage each year to property alone, no one can measure the damage to our children's lungs."

* * *

A total of $35 million in Federal funds has been appropriated to help finance construction of community mental health centers in 1965.

It is the initial allotment of funds for a $150 million three-year program of Federal grants-in-aid for building such centers. Grants will range from one-third to two-thirds of total construction costs.

The Department of Health, Education and Welfare said the centers built in 1965 will

form the nucleus of the new national mental health program to provide comprehensive treatment of the mentally ill in the patients' home communities.

Grants will be administered and awarded to eligible sponsors of the centers by the National Institute of Mental Health of the Public Health Service under terms of the Community Mental Health Centers Construction Act of 1963 (Public Law 88-164).

The centers must provide a minimum of the following five essential services to patients: inpatient treatment, outpatient treatment, partial hospitalization, with around-the-clock emergency service available in at least one of these. Centers must also provide consultation and educational services to community agencies.

In addition to the construction funds for centers, NIMH will grant $12 million in 1965 to hospitals for the mentally ill and for the mentally retarded to improve treatment and care of patients.

NIMH also will award $6 million in in-service training grants during 1965 to upgrade skills of hospital personnel in providing comprehensive care for patients.

Other funds available to NIMH under the regular mental health appropriation of 1965 include $163.7 million for research, fellowships, training of professionals and State grants, and $24.2 million for Institute research and items of direct operations.

MEDICAL NEWS IN TENNESSEE

Tennessee Association of Mental Health Centers

Oak Ridge Mental Health Center was host to the annual meeting of the Tennessee Association of Mental Health Centers on October 5-6 in Oak Ridge. Seventy-five persons associated with the 15 mental health centers throughout the state registered to hear the special speeches and attend the workshops. Dr. Earl Eversole, Chairman of the Board of the Oak Ridge Mental Health Center gave the welcoming address. Keynote speaker on October 5th was Dr. Joseph B. Parker, professor and chairman of the department of psychiatry, University of Kentucky Medical School. His topic was "Community Psychiatry."

Delegates attended workshops on: "Treatment of the Severely Ill Child in the Community" conducted by Dr. George Martin, associate professor of psychiatry, University of Tennessee Medical School; "Community Organization for Mental Health Programs", conducted by Dr. Gideon W. Fryer, resident director of the UT School of Social Work; "Psychotherapeutic Techniques with Schizophrenics" by Dr. James Anker, psychologist with the Psychological Services Center, UT; "The Psychiatric Emergency, Recognition and Management" by Dr. Lloyd C. Elam, assistant professor and chairman of the Department of psychiatry, Meharry Medical College; and "Relationship of Employment to Mental Health, Pro and Con" under the direction of Dr. Kenneth J. Munden, director of outpatient department, Tennessee Psychiatric Hospital and Institute.

The closing address was presented by Dr. Nat Winston, director, psychiatric services, Tennessee State Department of Mental Health. His subject was "Community Psychiatry and the Department of Mental Health.

Cumberland Clinic Presents Community Educational Program

A medical education program will be presented to residents of Crossville and neighboring communities by the Cumberland Clinic as a public service. The program will be presented monthly at the Cumberland Clinic and will comprise lectures, film presentations and question and answer periods conducted by one of the specialist physicians of the clinic. Each month a different medical subject will be presented which will appeal to the public. The meeting will be conducted on the third Tuesday of each month and the first lecture entitled "Reproduction, Prenatal Care, Childbirth and Care of the Newborn" was presented on November 17th. The program was conducted by Dr. R. S. Vinas, obstetrician-gynecologist, and Dr. Charlotte Olson, pediatrician. Both are specialists in their field of medicine and members of the staff of the clinic.

Director Named for Hospital Planning Council

Dr. David Babnew, Jr. has been named executive director of the newly formed Metropolitan Nashville Regional Health and Hospital Planning Council. Dr. Babnew will be responsible for formulating overall community plans and long range development projects for hospital and health centers, clinics and health related facilities for the metropolitan area. The organization was approved by the Nashville Area Chamber of Commerce as a needed group to help eliminate waste and duplication of services and make the greatest use of existing health and medical care facilities in the community.

Tennessee Nurses' Association

Approximately 400 professional nurses attended the 59th annual convention of the Tennessee Nurses' Association, October 14-16, at the Andrew Jackson Hotel in Nashville. The three-day meeting featured addresses by guest lecturers, panel discussions, clinical sessions and the election of new officers. Three outstanding speakers in the nursing field who addressed the convention were: Mrs. Marie S. Andrews, chairman of the department of nursing in the graduate school of Boston College; Miss Helen Connors, director of the American Nurses' Association legislative program and Miss Emily Holmquist, dean of the college of nursing of Indiana University Medical Center. Dr. Daugh W. Smith of Nashville was one of the guest lecturers on October 15th. His subject was "Care of a Colostomy."

Vanderbilt University School of Medicine

Dr. Robert Keith Rhamy assumed duties on October 15th as professor of urology and chief of the division of urology at Vanderbilt University School of Medicine. His appointment was announced by Dr. Randolph Batson, director of medical affairs and dean of the school. Since 1963, Dr. Rhamy has been associate professor of urology at Indiana University Medical Center.

Another recent appointment announced by Dean Batson is that of Dr. Paul Hutchins Ward as professor of otolaryngology and chief of the division of otolaryngology.

Dr. Ward came to Vanderbilt from a post as assistant professor at the University of Chicago, a post he had held since 1962.

Meharry Medical College

Meharry Medical College officially opened its 1964-65 academic year on October 5th with a freshman enrollment of 112 students representing 23 states and four foreign countries. The total enrollment at Meharry this year is 345 students with specialties in medicine, dentistry, dental hygiene and medical technology. Eleven new faculty members have been added to its medical and dental schools.

St. Jude Hospital—Memphis

Scientists at St. Jude Hospital have reported that a medical team is now treating with "dramatic success" childhood cancer cases which supposedly were hopeless. The medical team is using a technic that reverses the order of therapy ordinarily used in treating cancer. The reverse technic call for use of powerful drugs first to decrease the cancer, followed by radiation to further diminish it, and finally surgery to remove the supposedly inoperable cancer. Nine children suffering from what had been considered inoperable tumors have been treated and have had no signs of the disease for periods up to 20 months.

* * *

Dr. Herbert L. Ennis, bacteriologist at St. Jude Hospital, has received a $30,000, three-year research grant from the National Institute of General Medical Science. The grant will be used to study ways in which antibiotics retard production of protein by the cell. Dr. Ennis, assistant professor of biochemistry at the University of Tennessee Medical Units was instructor in pharmacology at Harvard University Medical School before joining St. Jude.

PERSONAL NEWS

Dr. Lloyd V. Crawford, Memphis, presented a paper on allergies of children before the American Academy of Pediatrics, Section on Allergy, on October 25th in New York.

Dr. Glenn M. Clark, Memphis, was a speaker be-

fore the Colombian Society of Internal Medicine in Colombia, South America.

The Obion Chamber of Commerce recently honored Union City's newest physician, **Dr. Sherlie S. Walker, Jr.** Dr. Walker is a member of the staff of the Obion County General Hospital.

Dr. Willis F. Kraemer, Knoxville, has been elected President of the East Tennessee Radiological Society. **Dr. J. Marsh Frere, Jr.,** Knoxville, was named President-elect, and **Dr. George K. Henshall,** Chattanooga, Vice President.

Dr. E. B. Paschall, Paris physician, was honored by the medical staff on Henry County General Hospital on October 12th for his 50 years service as a practicing physician.

Members of the University of Tennessee surgery staff presented papers, exhibits and teaching motion pictures at the annual Clinical Congress of the American College of Surgeons in Chicago, October 6-9. They were: **Drs. Harwell Wilson, Louis Britt, Roger Sherman, Henning Mayfield, R. M. Miles, E. H. Storer,** and **Richard DeSaussure.**

Dr. Maurice S. Rawlings, Chattanooga, was a guest speaker at the scientific session of the 8th International Congress on Diseases of the Chest when the American College of Chest Physicians met recently in Mexico City.

Dr. Robert M. Ruch, Memphis, has been elected a member of the executive committee and a director of the Tennessee Division of the American Cancer Society. Also named directors were **Dr. Edwin W. Cocke, Jr., Dr. Homer F. Marsh** and **Dr. David S. Carroll** of Memphis, and **Dr. William O. Murray** of Dyersburg.

A county-wide Civic Forum on the heart and heart diseases was sponsored by the Montgomery County Unit of the Middle Tennessee Heart Association on October 15th in Clarksville. The program consisted of a panel discussion presented by three Middle Tennessee physicians, **Dr. William G. Lyle** of Clarksville, and **Dr. Laurence Grossman** and **Dr. George Mann** of Nashville.

Dr. John D. Lay has opened his office for the practice of medicine in Savannah.

Dr. Estill L. Caudill, Jr., Elizabethton, has been appointed to the Tennessee State Board of Medical Examiners effective November 1st. He will fill the unexpired term of **Dr. J. S. Hawkins,** Knoxville, who has resigned.

Dr. Robert E. Mabe was guest speaker at a recent meeting of the Chattanooga Legal Secretaries Association.

Dr. Thomas B. Drinnen, Jr., now on the staff of University Hospital, has been named director of the recently organized Arthritis Clinic, sponsored by the Arthritis Foundation, and which in its infant stage has been serving the medically indigent of Knox County.

Dr. Robert Koehn, Clarksville, was guest speaker at a recent meeting of the Kiwanis Club.

Dr. Nat H. Swann, Signal Mountain, presented a paper at the annual meeting of the American College of Physicians in Los Angeles on October 10th.

"The Psychological and Medical Aspects of Dealing with Brain Injuries" was the subject discussed by **Dr. Louise Noel** and **Dr. Hammond Pride** before the Knox County Association of Retarded Children on October 5th.

Tennessee physicians who participated in the scientific sessions of the Southern Medical Association's 58th annual meeting in Memphis were:

Drs. E. William Roseberg, Lloyd V. Crawford, Jr., Glenn E. Horton, Jack Roane, Bernard M. Zussman, Wm. Wood Taylor, James H. Price, Wm. H. L. Dornette, Wm. H. Fancher, Ray Stark, Geo. M. Cannon, Ray E. Curle, Max Hughes, Harry L. Davis, Hamel B. Eason, Edward H. Storer, II, Robert A. Utterback, Alvin J. Cummins, Louis G. Britt, R. H. Patterson, Jr., Richard O. Bicks, Lawrence D. Amick, W. J. Gilmer, F. D. Sutton, P. J. Sparer, Roger T. Sherman, Felix A. Hughes, Jr., Chas. E. Eastridge, B. E. Greenberg, Duane M. Carr, Wm. T. Black, Phil C. Schreier, H. B. Turner, John Q. Adams, A. M. Alexander, Jr., Louie C. Henry, Bennette E. Everett, Jr., Louis P. Britt, Jr., Albert W. Biggs, John W. Runyan, Leo. G. Horan, Glen M. Clark, Chas. B. McCall, Frank A. Latham, Geo. W. Martin, Sam P. Patterson, John W. Wilks, Philip M. Lewis, D. F. Fisher, Ralph S. Hamilton, Jas. W. McKinney, Thos. A. Currey, Alice R. Deutsch, Frank L. Seeger, Jr., Melvin W. DeWeese, Mark Kashgarian, Henry Packer, Henry A. Boldt, Ralph S. Hamilton, Wm. F. Murrah, Jr., Chas. M. King, W. W. Wilder, Edwin W. Cocke, Jr., H. H. Porter, H. G. LaVelle, Jr., Thos. A. Maguda, M. Coyle Shea, Jr., Hugh M. Smith, Jr., Fred P. Sage, R. Beverly Ray, Alvin J. Ingram, Lee W. Milford, Jr., Geo. B. Higley, Jr., Moore Moore, Jr., R. A. Calandruccio, B. G. Mitchell, Lewis D. Anderson, Allen S. Edmondson, Marcus J. Stewart, John J. Shea, Jr., Harold G. Tabb, Sam H. Sanders, Richard H. Walker, A. P. Inclan, Eugene W. Fowinkle, Hans N. Naumann, L. W. Diggs, I. D. Michelson, Cyrus C. Erickson, Philip George, Kathleen Hernandez, Donald P. Pinkel, Luis Borella, David H. James, Jr., Rufus E. Craven, McCarthy DeMere, Anthony P. Jerome, Robert C. Reeder, Jas. W. Walker, L. Henning Mayfield, Jas. W. Pate, L. E. Ainger, G. Daniel Copeland, Paul H. Sherman, Ralph F. Bowers, Samuel L. Raines, Gordon L. Mathes, John W. Apperson, Eugene H. Page, all of Memphis; **Drs. Fred W. Ryden, Robert Quinn, B. F. Byrd, Jr., R. H. Kampmeier, Lawrence G. Schull, Harry T. Moore, Jr., W. G. Gobbel, Jr., R. H. Edwards, Sam E. Stephenson, Jr., Burton P. Grant, Vernon H. Reynolds, Frank E. Whitacre, Don L. Eyler,** Nashville; **Drs. Robert G. Brashear, Harry E. Livingston, Edward L. Tauxe, Vincent T. Young,** Knoxville; **Dr. Charles J. Ray,** Chattanooga; and **Dr. C. C. Lushbaugh,** Oak Ridge.

Dr. J. Capers Jones, Murfreesboro, has opened his office for the practice of psychiatry.

ANNOUNCEMENTS

Calendar of Meetings, 1964-65

State

April 11-14 —Tennessee Medical Association Annual Meeting, Read House Hotel, Chattanooga

Regional

Jan. 25-27, 1965 —Southern Radiological Conference, Grand Hotel, Point Clear, Alabama

March 25-27 —Mid-Central States Orthopaedic Society, Velda Rose Motel, Hot Springs, Ark.

April 22-24 —Medical Association of the State of Alabama, Birmingham, Ala.

National

Jan. 9-14, 1965 —American Academy of Orthopaedic Surgeons, Americana Hotel New York (members and invited guests only).

Jan. 27-31 —Neurosurgical Society of America, The Americana Hotel, San Juan

Feb. 5-10 —Congress on Medical Education, Palmer House, Chicago

Feb. 10-13 —American College of Radiology (members only) Bellevue-Stratford Hotel, Philadelphia

Feb. 13-17 —American Academy of Allergy, Americana Hotel, Bal Harbour, Fla.

Feb. 15-17 —American College of Surgeons (sectional meeting), Bellevue-Stratford Hotel, Philadelphia

Feb. 17-21 —American College of Cardiology, Statler Hilton Hotel, Boston

Feb. 25-Mar. 2 —American Dermatological Association, Boca Raton Hotel, Boca Raton, Fla.

March 19-21 —American Society of Internal Medicine, Conrad Hilton Hotel, Chicago

March 22-26 —American College of Physicians, Chicago

March 26-27 —National Conference on Rural Health, Americana Hotel, Miami Beach, Fla.

March 29-31 —American Association for Thoracic Surgery, Roosevelt Hotel, New Orleans

April 4-8 —American College of Obstetricians and Gynecologists, Civic Auditorium, San Francisco

April 9-15 —American Academy of General Practice, San Francisco

April 25-29 —International Congress of Surgeons (North American Federation) Las Vegas, Nev.

April 26-May 1 —American Academy of Neurology, Sheraton Cleveland Hotel, Cleveland

National Medicolegal Symposium

A National Medicolegal Symposium, jointly sponsored by the American Medical Association and the American Bar Association, will be held March 11-13, at the Dunes Hotel in Las Vegas, Nevada. Purposes of the national mediolegal event are to educate physicians and attorneys on matters of mutual interest, to improve practical administration of justice, and to promote harmonious relations between the medical and legal professions. Outstanding medicolegal authorities from throughout the nation will participate in the program. A detailed program and registration form will be mailed by the American Medical Association at a later date.

New National Society Formed For Facial Plastic Surgery

The American Academy of Facial Plastic and Reconstructive Surgery, Inc., has been formed through the merger of two national associations of otolaryngologists, The American Otorhinologic Society for Plastic Surgery, Inc., and The American Society of Facial Plastic Surgery, Inc. It was formed with the assistance of the American Medical Association and the American Academy of Ophthalmology and Otolaryngology.

A nonprofit organization, the new society is established, according to its constitution and by-laws, to "stimulate study, research and scientific advancement in the field of plastic and reconstructive surgery and all related basic sciences."

Training Programs Offered By University of California School of Public Health

Four training programs offered by the University of California School of Public Health at Berkeley are: (1) Basic Training in Maternal and Child Health (2) Training in Mental Retardation (3) Training in School Health (4) Career Development Program (Combined Training in MCH and Pediatrics). Fellowships are available at the School of Public Health, provided by the U. S. Children's Bureau and the U. S. Public Health Service. Inquiries for additional information should be directed to Dr. Helen M. Wallace, Professor of Maternal and Child Health, University of California School of Public Health, Earl Warren Hall, Berkeley, California 94720.

Conference on Rural Health

AMA's 18th National Conference on Rural Health will be held March 26-27, at the Americana Hotel, Miami Beach, Florida. Conference highlights include:

Keynote Address—"Health Is A Way of Life" by Carl S. Winters, D.D., International Lecturer.

"The Challenge Ahead"—Roy Battles, Director, Clear Channel Broadcasting Service.

Banquet Speaker, Edward R. Annis, M.D., Immediate Past President, AMA and World Medical Association.

Additional information may be obtained from the Council on Rural Health, American Medical Association, 535 North Dearborn Street, Chicago, Illinois 60610.

ALL TMA MEMBERS—NOTICE

DISTINGUISHED SERVICE AWARDS

TMA's Board of Trustees has established a maximum of three Distinguished Service Awards that may be awarded each year. The awards are to be made at the President's banquet during the Annual Meeting of TMA each April.

HERE'S HOW TO SUBMIT A NOMINEE:

1. Any member of the Tennessee Medical Association in good standing is eligible for nomination, and any member of TMA in good standing may nominate a recipient for this award.

2. The nominations for the recipient will be evaluated by the Board of Trustees and such nominations with factual supporting data should be filed with the Executive Director of TMA *not later than January 1 preceding the annual meeting.* The data should provide:

   (a) Biographical information on the nominee, including a recent photograph, if possible.

   (b) Medical education and training of nominee.

   (c) Professional history, including private practice, specialty training, contributions to medical literature, teaching affiliations, staff connections, etc.

   (d) Detailed description of a specific or general contribution or accomplishment of the nominee to the advancement of medical science or any of the phases upon which the nomination is to be based.

   (e) Substantiating evidence of merit including printed materials, publications, articles, other citations.

3. All nominees for the distinguished service awards will be evaluated with not more than three awards being made in any one year.

1964 MEMBERS OF TENNESSEE MEDICAL ASSOCIATION

The list of members of the Tennessee Medical Association is published in compliance with a provision of the Constitution and By-Laws. The data are accurate as of December 10, 1964. They are arranged in the following order:

List of active members.

Counties arranged alphabetically.

Towns in each county arranged alphabetically and the members in each town arranged alphabetically.

List of members residing outside the state arranged alphabetically.

List of veteran members.

List of members who have died in the year 1964.

ANDERSON COUNTY

Andersonville

E. L. Parrott

Clinton

A. W. Bishop
P. M. Dings
J. S. Hall
Henry Hedden, Jr.
John J. Smith

Lake City

Fred S. Booth (Mbr. Knox Co.)
John S. Burrell (Mbr. Knox Co.)

Norris

S. G. McNeeley

Oak Ridge

Gould A. Andrews
Robt. P. Ball
R. R. Bigelow
Louis Bryan
Alex G. Carabia
Chas. Congdon
Betty M. Cooper
John P. Crews
Kenneth Crounse
Dexter Davis
John D. DePersio
Robt. E. DePersio
Armando DeVega (Mbr. Hamilton Co.)
J. L. Diamond
Earl Eversole
T. Guy Fortney
Frank H. Genella, Jr.
Herbert Gerstner
C. B. Gurney
William P. Hardy
J. M. Hays
Ernest L. Hendrix
William B. Holden
R. W. Holland
R. A. Johnson
Harvey Keese, Jr.
Avery P. King
Ralph Knisely
Kenneth S. Lane
Thomas A. Lincoln
Lynn F. Lockett
Joseph S. Lyon
Dana W. Nance
Bill. M Nelson
Etna Little Palmer
Elmer L. Parrott
Lewis F. Preston
William W. Pugh
Charles J. Ragan
Thos. L. Ray
Henry B. Ruley
Kyle O. Rutherford
C. W. Sensenbach
Beecher W. Sitterson
Paul E. Spray
Charles R. Sullivan
Daniel M. Thomas
Joe E. Tittle
Elsie V. Tompkinson
David A. White
Gino F. Zanolli

BEDFORD COUNTY

W. L. Chambers
A. L. Cooper
John S. Derryberry
Alfred Farrar
Taylor Farrar
Henry Feldhaus, Jr.
Grace Moulder
A. T. Richards
Carl Rogers
C. T. Stubblefield
Sara Womack

*Residency

BENTON COUNTY

Camden

Wm. H. Blackburn
Robt. L. Bourne, Jr.
J. S. Butterworth
A. T. Hicks
R. L. Horton
John H. Overall, Jr.

BLEDSOE COUNTY

Pikeville

Thomas G. Granwell (Mbr. Hamilton Co.)
Rufus S. Morgan (Mbr. Hamilton Co.)

BLOUNT COUNTY

Alcoa

Oliver K. Agee
Joe S. Henderson
Robt. D. Proffitt

Louisville

Beulah Kittrell

Maryville

J. H. Bowen
H. A. Callaway, Jr.
Lea Callaway
J. W. Christofferson
Mary D. Cragan
W. C. Crowder
Lynn F. Curtis
W. N. Dawson
Ted L. Flickinger
R. H. Haralson, Jr.
J. S. Henry
James T. Holder
Cecil B. Howard
H. L. Isbell
Edward M. Kelman
E. P. Kintner
Samuel S. Lamheth
Roy Y. Laughmiller, Jr.
Julian C. Lentz, Jr.
C. B. Lequire
Robert F. Leyen
F. S. Lovingood
Norman A. McKinnon, Jr.
J. F. Manning
James H. Millard, Jr.
L. Q. Myers
Robert D. Mynatt
J. S. Phelan
Tom Proctor
James N. Proffitt
B. P. Ramsey
O. L. Simpson, Jr.
Frent Vandergriff
Lowell E. Vinsant
John A Yarborough

BRADLEY COUNTY

Calhoun

Ivan Weir

Cleveland

James L. Allen
Robert L. Allen
John M. Appling
D. N. Arnold
Marvin R. Batchelor
Chalmer Chastain, Jr.
Robert H. Cofer
Jack R. Free
Wm. A. Garrott
C. S. Heron
Ivan C. Humphries, Jr.
Frank K. Jones, Jr.
C. H Kimball
Clyde V. Kyle, Jr.
J. C. Lowe
Joseph McCoin
Hays Mitchell
F. Harris Pierce
Wm. L. Proffitt
John A. Rogness
Wm. R. Smith
C. T. Speck, Jr.
W. C. Stanbery
S. J. Sullivan
Claud H. Taylor
James R. Thurman
Madison S. Trewhitt
Gilbert A. Varnell

CAMPBELL COUNTY

Jellico

Charles A. Prater
Ned C. Watts

La Follette

J. D. Crutchfield
M. L. Davis
P. T. Howard
P. J. O'Brien
J. W. Presley
John C. Pryse
R. C. Pryse
L. J. Scargeant
Burgin H. Wood

CANNON COUNTY

Woodbury

William A. Bryant (Mbr. Rutherford Co.)
Russell E. Meyers (Mbr. Rutherlord Co.)
Ralph Moore (Mbr. Ruthrford Co.)

CARROLL COUNTY

Bruceton

R. T. Keeton

Huntingdon

R. B. Wilson

McKenzie

Sidney L. Bicknell (Mbr. Shelby Co.)
J. T. Holmes
James H. Robertson

CARTER COUNTY

Elizabethton

Robert J. Allen
Hoyle E. Bowman
Martin S. Bronson
Richard Bucher
F. L. Caudill, Jr.
W. G. Frost
Clarence E. Goulding, Jr.
Royce Holsey
C. L. Lincoln
Floyd E. May
W. Joyce May
E. T. Pearson
Dillard Sholes, Jr.
D. J. Slagle
Charles J. Wells
James M. Willett

Roane Mountain

George W. Patterson

CHESTER COUNTY

Henderson

Darrell King
O. M. McCallum
R. L. Wilson

CLAIBORNE COUNTY

Harrogate

George L. Day (Mbr. Campbell Co.)
Roy C. Ellis, Jr. (Mbr. Campbell Co.)

Tazewell

Fred Reed (Mbr. Knox Co.)

New Tazewell

Wm. N. Smith (Mbr. Knox Co.)
Jean C. Tarwater (Mbr. Knox Co.)

CLAY COUNTY

Celina

Champ E. Clark

COCKE COUNTY

Newport

Robert B. McMahan
Drew A. Mims
Wm. B Robinson
Glen C. Shults
Fred M. Valentine
Fred M. Valentine, Jr.

COFFEE COUNTY

Manchester

William D. Calhoun
Clarence H. Farrar
Howard A. Farrar
*Lawrence G. Gardner
John A. Shields
Coulter S. Young

Tullahoma

R. L. Brickell
W. B. Frierson (Mbr. Bedford Co.)
B. E. Galbraith
Edwin E. Gray, Jr.
Charles B. Harvey
J. M. King
Charles W. Marsh
Earl E. Roles, Jr.
C. C. Snoddy
Chas. Harry Webb

CROCKETT COUNTY

Alamo

E. O. Prather, Jr.

Bells

Charles N. Hickman
R. W. Mayheld
Wm. R. Sullivan

CUMBERLAND COUNTY

Crossville

James T. Callis
R. Gene Cravens
Paul A. Erwin, Jr.
Wm. E. Evans
Harvey H. Grime
R. Donathan Ives
R. G. Kloss
H. F. Lawson
Robert M. Metcalfe
Stuart P. Scaton

Pleasant Hill

L. A. Chouch
Margaret K. Stewart

DAVIDSON COUNTY

Donelson

E. E. Anderson
Luther A. Beazley
R. B. Gaston
C. N. Gessler
Chas. H. Huddleston
Joseph E. Hurt
Orrin L. Jones
Joe M. Miller
James B. Millis
Luther E. Smith
Wm. B. Wadlington

Goodlettsville

James S. Hastie
Lee F. Kramer

Madison

William J. Card
Sam W. Carney, Jr.
Frederec B. Cothren
George B. Hagan
J. Wesley Osborne
Jefferson C. Pennington, Jr.
Robt. L. Pettus, Jr.
Joe F. Sutherland
Harry Witztum

Madison College

Hillis F. Evans
Julian C. Gant
Cyrus E. Kendall

Nashville

Crawford W. Adams
R. W. Adams, Jr.
J. W. Alford, Jr.
William C. Alford
Wm. E. Allison
J. Clyde Alley, Jr.
Ben J. Alper
W. L. Alsobrook
Arthur R. Anderson
Edwin B. Anderson
H. R. Anderson
J. Sumpter Anderson, Jr.
Robt. S. Anderson
J. J. Ashby
Daniel Baccus, D.D.S.
Harry Baer
J. Mansfield Bailey (Mbr. Wilson Co.)
Joseph J. Baker
Thurman Dee Baker
Sidney W. Ballard
Preston H. Bandy
Edwin H. Barksdale
Allan D. Bass
Gustav A. Batizy
Jack M. Batson
Randolph Batson
David S. Bayer
Eric Bell, Jr.
Lynch D. Bennett
Edmund W. Benz
Stanley Bernard
John H. Beveridge
Otto Billig
F. I. Billings, Jr.
Geo. T. Binkley, Jr.
Russell T. Birmingham
Eugene L. Bishop, Jr.
Lindsay K. Bishop
Frank M. Blackwell
James B. Boddie, Jr.
Michael A. Bokat
Arthur G. Bond
John B. Bond
Walter A. Bonney, Jr.
Geo. W. Bounds, Jr.
John M. Boylin
H. B. Brackin
H. B. Brackin, Jr.
Cloyce F. Bradley
G. Hearn Bradley
James M. Brakefield
T. F. Bridges
Thos. E. Brittingham
Arthur L. Brooks
Dorothy L. Brown
M. L. Brown (Mbr. Lincoln Co.)
Harry G. Browne
J. Thomas Bryan
John C. Burch
Joseph G. Burd
R. N. Buchanan, Jr.
James E. Burnes
George R. Burrus
Roger B. Burrus
Swan B. Burris
B. F. Byrd, Jr.
James J. Callaway
Richard O. Cannon
Joe M. Capps
George K. Carpenter
G. K. Carpenter, Jr.
Oscar W. Carter
Norman M. Cassell
Lee F. Cayce
Robert L. Chalfant
Eric M. Chazen
Abraham P. Cheij
Amos Christie
William M. Clark
Jeannine A. Classen
Kenneth L. Classen
Everett M. Clayton, Jr.
Cully A. Cobb, Jr.
Robert T. Cochran
Henry A. Cohen
John H. Coles, III
Harold A. Collins
Paula F. Conaway
George E. Cooke
Charles Corbin, Jr.
Orrie A. Couch, Jr.
Sam C. Cowan, Jr.
Frederic E. Cowden
Geo. Boyd Crafton
H. James Crecraft
R. R. Crowe
E. Perry Crump
W. Andrew Dale
Rollin A. Daniel, Jr.
Wm. J. Darby
Philip V. Daugherty
Michael D. Davis
G. Wm. Davis
T. W. Davis
Thomas C. Delvaux, Jr.
Wm. A. Demonbreun
Harold C. Dennison
Walter L. Diveley
Wm. M. Doak
Wm. D. Donald
Earl D. Dorris
Robert T. Doster
L. Rowe Driver
Ray L. Dubuisson
Price H. Duff
George E. Duncan
Herbert Duncan
Wm. H. Edwards
Lloyd C. Elam
Paul Elcan, D.D.S.
Phillip C. Elliott
James W. Ellis
Irwin B. Eskind
Harry M. Estes
E. Wm. Ewers
Don L. Eyler
Wm. T. Farrar
John L. Farringer, Jr.
W. B. Farris
W. F. Faulk, Jr.
R. O. Fessey
Jacob N. Fidelholtz
John P. Fields
Robert M. Finks
John M. Flexner
Robert M. Foote
Howard R. Foreman
Garth E. Fort
John H. Foster
S. Benjamin Fowler
Richard France
Horace M. Frazier
John W. Frazier, Jr.
Thomas F. Frist
James L. Fuqua
Robert K. Galloway
Chas. K. Gardner
James C. Gardner
Sam Y. Garrett

Hamilton V. Gayden
Horace C. Gayden
Charles M. Gill
J. P. Glover, Jr.
John R. Glover
Fred Goldner, Jr.
James E. Goldsberry
David K. Gotwald
Louis S. Graham
Burton P. Grant
Herschel A. Graves, Jr.
Clifton E. Greer, Jr.
John W. Griffith, Jr.
John H. Griscom
Jerry W. Grise
Thos. W Grizzard
Laurence A. Grossman
Milton Grossman
Wm. E. Gupton, Jr.
Arnold Habet, Jr.
David W. Hailey
Chas. E. Haines, Jr.
Wallace H. Hall, Jr.
Thos. B. Haltom
Chas. M. Hamilton
Roy G. Hammonds
Axel C. Hansen
Robert A. Hardin
Robert L. Harrington
Jackson Harris
E. F. Harrison
(Mbr. Hamilton Co.)
Robt. C. Hartmann
A. B. Harwell
James T. Hayes
John H. L. Heintzelman
James B. Helme
J. L. Herrington, Jr.
John G. Herzfeld
B. K. Hibbett, III
J. B. Hibbitts, Jr.
William Higginson
Elmore Hill, D.M.D.
I. R. Hillard
John W. Hillman
R. H. Hirsch
(Mbr. Robertson Co.)
Chas. S. Hirshberg
Charlie Joe Hobdy
Geo. W. Holcomb, Jr.
Chas. F. Hollabaugh
W. W. Hubbard
James M. Hudgins
Granville W. Hudson
R. H. Hutcheson, Jr.
Vernon Hutton, Jr.
Maurice Hyman
M. D. Ingram, Jr.
Albert P. Isenhour, Jr.
J. McK. Ivie
J. Kenneth Jacobs
W. F. B. James
John A. Jarrell, Jr.
D. J. Johns
Alfonso P. Johnson
Hollis E. Johnson
Ira T. Johnson, Jr.
James W. Johnson
Chambliss R. Johnston
Edmund P. Jones
John R. Jones
T. M. Jordan
R. H. Kampmeier
Herman J. Kaplan
A. E. Keller
J. Allen Kennedy
Wm. G. Kennon, Jr.
John P. Kinnard, Jr.
Lowry D. Kirby
Carl T. Kirchmaier
J. A. Kittley, Jr.
Eugene C. Klatte
O. Morse Kochtitzky
Leonard J. Koenig
C. J. Ladd, D.D.S.
Roland D. Lamb
Ralph M. Larsen
Horace T. Lavely, Jr.
David H. Law
G. Allen Lawrence
A. R. Lawson
James P. Lester
Patrick R. Levesque
Malcolm R. Lewis
Milton S. Lewis
Grant W. Liddle
Richard C. Light
Joanne Linn
Robert J. Linn
A. B. Lipscomb
Joseph A. Little
Thomas C. Littlejohn
Jackson P. Lowe
S. L. Lowenstein
Frank H. Luton
Philip L. Lyle
Robt. H. Magruder
Guy Milford Maness
Edw. H. Martin, D.D.S.
Travis H. Martin
Ralph W. Massie
Jas. Andrew Mayer
Ben R. Mayes
Charles W. MacMillan
Robert D. MacMillan
Curtis P. McCammon
G. S. McClellan
Robt. E. McClellan
C. C. McClure, Jr.
Robt. L. McCracken
M. Chas. McMurray
Barton McSwain
Wm. F. Meacham
Arnold M. Meirowsky
Cullen R. Merritt, II
Andrew H. Miller
Cleo M. Miller
James B. Miller
John Maurice Miller
Lloyd C. Miller
Lee R. Minton
Edwin H. Mitchell
Thomas F. Mogan
R. W. Money
C. Calvin Moore
Harry T. Moore, Jr.
N. B. Morris
P. G. Morrissey, Jr.
M. K. Moulder
I. Armistead Nelson
Dewey Nemec
Tom E. Neshitt
E. V. Newman
Oscar F. Noel
Margaret S. Norris
Robert W. Noves
Wm. T. Nunes
John R. Olson
Wm. F Orr, Jr.
James G. Overall
Fred W. I. Overton
Fred D. Ownby
Richard P. Ownbey
Homer M. Pace, Jr.
Thomas F. Paine, Jr.
Roy Wm. Parker
Thomas F. Parrish
Bernard J. Pass
R. C. Patterson, Jr.
C. Gordon Peerman, J
Edna S. Pennington
Thos. Guy Pennington
George L. Perler
Frank A. Perry
M. A. Petrone
James M. Phythyon
David R. Pickens, Jr.
Charles B. Pittinger
Phillip P. Porch, Jr.
T. Edward Potts
Robert W. Quinn
James Seay Read
Robert M. Reed
John D. Reese
E. M. Regen
Eugene M. Regen, Jr.
S. C. Reichman
Roy J. Renfro
Vernon H. Reynolds
John R. Rice
Greer Ricketson
Douglas H. Riddell
Elkin L. Rippy
S. S. Riven
Joseph D. Robertson
Fred C. Robinson
David E. Rogers
D. T. Rolfe
Marvin J. Rosenblum
Sol A. Rosenblum
Louis Rosenfeld
P. M. Ross
Fred A. Rowe, Jr.
Robert M. Roy
Lenor de Sa Ribeiro
Robert N. Sadler
Louis Sampson
Dan S. Sanders, Jr.
Houston Sarratt
Elwyn A. Saunders
John L. Sawyers
Julia E. Sawyers
J. H. Sayers, Jr.
C. David Scheibert
Stephen Schillig, Jr.
Jake C. Schmitt, D.D.S.
Lawrence G. Schull
Herbert J. Schulman
H. Wm. Scott, Jr.
A. B. Scoville, Jr.
C. Gordon Sell
Sarah H. Sell
John L. Shapiro
Harry S. Shelley
Ben A. Shelton
Wm. F. Sheridan, Jr.
Abram C. Shmerling
N. S. Shofner
Brian T. Shorney
Harrison H. Shoulders, Jr.
Harrison J. Shull
D. R. W. Shupe
Burton Silbert
T. E. Simpkins
Wm. T. Slonecker
Chas. B. Smith
Daigh W. Smith
Henry C. Smith
John Randall Smith
Marion L. Smith
Anderson Spickard, Jr.
Bertram F. Sprofkin
Daphine Sprouse
Richard L. Steele
Sam E. Stephenson, Jr.
Joseph Steranka
Lee Wm. Stewart
Frank W. Stevens
Hugh L. C. Stevens
William S. Stoney
Joe M. Strayhorn
W. D. Strayhorn
Wilborn D. Strode
Wm. D. Sumpter, Jr.
Arthur J. Sutherland
Jack T. Swan
Richard P. Taber
G. J. Tarleton, Jr.
John M. Tanner
Ed L. Tarpley
Pauline Tenzel
Robert T. Terry
Andrew B. Thach, Jr.
C. S. Thomas
J. N. Thomasson
John B. Thomison
Chas. B. Thorne
Spencer Thornton
W. O. Tirrill, Jr.
Kirkland W. Todd, Jr.
Robt. H. Tosh
C. C. Trabue, IV
Leslie E. Traughber, Jr.
Carr A. Treherne
C. B. Tucker
John M. Tudor
Wm. O. Vaughan
Joseph W. Wahl
Ethel Walker
Matthew Walker
John M. Wampler
James W. Ward
Paul H. Ward
Russell D. Ward
Thomas F. Warder
Thomas S. Weaver
B. H. Webster
Bernard Weintsein
Charles F. Wells
A. Lawrence White
Frank E. Whitacre
Joe I. Whitfield
Earl F. Wilkinson
Edwin L. Williams
W. Carter Williams
(Mbr. Smith Co.)
W. Carter Williams, Jr.
Nat T. Winston
(Mbr. Hamilton Co.)
Frank G. Witherspoon
Norman E. Witthaner
Frank C. Womack, Jr.
C. C. Woodcock
M. C. Woodfin
John R. Woods
John L. Wyatt
Sparkman H. Wyatt
Kate Savage Zerfoss
Thomas B. Zerfoss
Thos. B. Zerfoss, Jr.

Old Hickory

Alvin Hawkins
James K. Lawrence
R. P. Miller
Henry D. Murray
Howard C. Pomeroy
E. B. Rhea
W. W. Wilson

DECATUR COUNTY

Parsons

H. L. Conger
Robert M. Fisher
Paul Teague

DEKALB COUNTY

Alexandria

H. Odell Mason
(Mbr. Smith Co.)

DICKSON COUNTY

Charlotte

James C. Elliott

Dickson

J. T. Allen
W. A. Bell, Jr.
Mary Baxter Cook
W. A. Crosby
J. T. Jackson
Lawrence C. Jackson
Lawrence R. Jackson
W. M. Jackson
E. W. McPherson

DYER COUNTY

Dyersburg

W. E. Anderson
J. Paul Baird
Thos V. Banks
James W. Bonds
J. D. Connell
P. A. Conyers
W. E. David
Thomas W. Johnson
Robert T. Kerr
Elton King
O. B. Landrum
Fred Moore
J. C. Moore
William O. Murray
J. G. Price
R. David Taylor
W. I. Thornton, Jr.
L. A. Warner, Jr.
Lydia V. Watson

Newbern

Wm. L. Phillips
P. B. Widdis

Trimble

V. Art Murphy

FAYETTE COUNTY

Somerville

John L. Armstrong
John M. Bishop
Frank S. McKnight
Lloyd H. Plemmons
Karl B. Rhea
Lee Rush, Jr.

FENTRESS COUNTY

Jamestown

B. Fred Allred
Guy C. Pinckley
Jack C. Smith
Shelby O. Turner

FRANKLIN COUNTY

Decherd

Dewey W. Hood

Huntland

L. J. Stubblefield
(Mbr. Lincoln Co.)

Sewanee

Ruth A. Cameron
Charles D. Couser
Charles B. Keppler
E. W. Kibry-Smith
H. T. Kirby-Smith
J. L. Parsons, Jr.

Winchester

Jo C. Anderton
Reynolds Fite
Gerald E. Johnson
George L. Smith
James Van Blaricum

GIBSON COUNTY

Dyer

John W. Ellis

Humboldt

H. G. Barker
Chas. W. Davis
A. H. Fick
Wm. H. Roberts
Jas. D. Rozzell
George E. Spangler

Medina

Robert Morris

Milan

H. P. Clemmer
James O. Fields
F. L. Keil
James H. Williams
Philip G. Williams

Trenton

Edw. C. Barker
E. C. Cratton
James W. Hall
Wm. M. Phillips

GILES COUNTY

Ardmore

C. B. Marshall
(Mbr. Lincoln Co.)

Pulaski

Robert B. Agee
K. M. Kresenberg
W. H. Murrey
W. K. Owen
J. T. Speer
D. M. Spotwood

GRAINGER COUNTY

Rutledge

L. G. Bryan
(Mbr. Hamblen Co.)
I. J. Hill
(Mbr. Hamblen Co.)

Washburn

Robt. J. Phlegar
(Mbr. Hamblen Co.)

GREENE COUNTY

Greeneville

V. R. Bottomley
Robert G. Brown
Robt. S. Cowles, Jr.
Luke L. Ellenburg
Haskell W. Fox
R. B. Gibson
C. H. Helms
Hal Henard
N. P. Horner
C. D. Huffman
A. K. Husband
Y. A. Jackson
Ben J. Keebler
John D. Lay
Haskell B. McCollum
W. Lewis McGuffin
James R. McKinney
Kenneth C. Susong

Mosheim

I. Dale Brown
G. R. Evans

HAMBLEN COUNTY

Morristown

W. K. Alexander
Lee R. Barclay
Howard T. Brock
Robert L. Brown
John D. Caldwell
Kemp Davis
Donald R. Dees
C. J. Duby
Crampton H. Helms
Y. Alvin Jackson
John H. Kinser
I. J. Little, Jr.
E. Gene Lynch
John L. Pearce
J. W. Richardson
Charles S. Scott
Powell M. Trusler

HAMILTON COUNTY

Chattanooga

Jerome H. Abramson
Chester G. Adams
Jesse E. Adams
John W. Adams, Jr.
Julian Adams
Wm. P. Aiken
John T. Albritton
Billy J. Allen
C. H. Alper
E. R. Anderson
Harry S. Anderson
J. J. Armstrong
I. L. Arnold
Stewart H. Auerbach
Merton Baker
Robert E. Baldwin
Fred B. Ballard, Jr.
Woodruff A. Banks, Jr
H. B. Barnwell
George E. Beckman, Jr
E. F. Besemann
Samuel S. Binder
W. R. Bishop
Robt. W. Boatwright
Robert J. Bochm
Walter E. Bochm
Harry V. Bork
Wm. D. Brackett
Frank S. Brannen
E. Brook Brantly
Roger Breytspraak
J. C. Brooks, Jr.
Reid L. Brown
Edward F. Buchner, III
Arch H. Bullard
John A. Burke
Thomas L. Buttram
W. R. Buttram
W. R. Buttram, Jr.
Earl R. Campbell
Earl R. Campbell Jr.
Don A. Cannon
Maurice A. Canon
E. E. Carrier
John P. Carter
Bennett W. Canghran
Douglas Chamberlain
Edwin F. Chobot, Jr.
Charles R. Clark
Robert B. Clark, III
O. H. Clements
Frank C. Combes
J. Hicks Corey, Jr.
Dennis M. Cornett
George E. Cox
James L. Craig
John M. Crowell
Tolbert C. Crowell
Doyle E. Currey
J. Tom Currey
Thos. H. Curtis
James B. Davis
James W. Davis
O. M. Derryberry
Robt. G. Demos
Joseph J. Dodds
Richard B. Donaldson
James R. Drake
Albert S. Easley
A. F. Ebert
Bruce Elrod
John T. Evans
Robt. E. Eyssen
J. R. Fancher
George W. Farris
Richard Van Fletcher
Malcolm S. Floyd
A. C. Ford
Wm. Robert Fowler
Daniel H. Framm
Guy M. Francis
J. Marsh Frere
Augustus H. Frye, Jr.
O. C. Gass
G. C. Gibson, Jr.
Robt. H. Giles, Jr.
E. Wayne Gilley
Kenneth N. Gould
Al W. Gothard
Frank B. Graham
Joseph W. Graves
Wm. R. Green
Bruce F. Grotts
T. A. Grubbs, Jr.
F. Russell Hackney
Robert B. Hagood, Jr.
Foster Hampton, Jr.
John C. Hampton
H. Barlow Harris
Carl A. Hartung
Chas. W. Hawkins

James M. Hays
James R. Headrick
James W. Hedden
Robt. S. Hellman
H. B. Henning
Warren B. Henry
George K. Henshall, Jr.
Homer D. Hickey
John M. Higgason
J. M. Higginbotham
J. F. Hobbs
Richard G. Hofmeister
Pope B. Holliday Jr.
H. W. Hollingsworth
Benton B. Holt, Jr.
C. M. Hooper
Rudolph Hoppe
Don R. Hornsby
John O. House
W. P. Hutcherson
D. Isbell
DeWitt B. James
Gerald I. Jones
Harry E. Jones
Edward G. Johnson
Joseph W. Johnson, Jr.
J. E. Johnson
J. Paul Johnson
J. Paul Johnson, Jr.
D. B. Karr
John J. Killeffer
John E. Kimball, Jr.
C. Windom Kimsey
Warren H. Kimsey
Clyde R. Kirk
Durwood L. Kirk
Gene H. Kistler
Rudolph M. Landry
Fred D. Lansford, Jr.
Chester L. Lassiter
Lawrence H. Lassiter
Joseph V. Lavecchia, Jr.
Stewart Lawwill, Jr.
Willis E. Lemon
Ernest C. Lineberger
Philip H. Livingston
Ira M. Long
Robt. E. Mabe
Wm. B. MacGuire, Jr.
T. J. Manson
S. S. Marchbanks
C. B. C. Marsh
Fred E. Marsh
Cooper H. McCall
David P. McCallie
Augustus McCravey
Preston C. McDow
George R. McElroy
Edel F McIntosh
J. Edward McKinney
H. C. Miles
Robert T. Miller
George A. Mitchell
Thomas C. Monroe
T. F. Mullady, III
Fay B. Murphey, Jr.
Oscar B. Murray
Robt. W. Myers
Fujie Nakamura
Marvin M. Nathan
Merrill F. Nelson
Cecil E. Newell
E. T. Newell, Jr.
Paul V. Nolan
Robert N. Osmundsen
Wm. C. Pallas
A. M. Patterson
R. L. Patterson
E. White Patton
Millard F. Perrin
Walter A. Peterson Jr.
W. Houston Price
Maurice Pruitt
Walter Puckett, III
Jesse O. Quillian
Joe Anne Quillian
Maurice Rawlings
Chas J. Ray
Chas. W. Reavis
W. D. L. Record
E. E. Reisman, Jr.
James E. Reynolds
Gilbert M. Roberts, Jr.
Robert C. Robertson
Alfred P. Rogers
William E. Rowe
James R. Royal
Don J. Russell
Lewis A. Schmidt, III
Edgar L. Scott, Jr.
H. A. Schwartz
Clarence Shaw
George W. Shelton
W. J. Sheridan
Edwin H. Shuck, Jr.
Harold G. Sibold
George L. Sivils
Francis J. Smiley
Moore J. Smith, Jr.
Stewart P. Smith
Philip C. Sottong
Robert T. Spalding
James H. Spaulding
Richard F. Stappenbeck
Eleanor Stafford
Harold J. Starr
Willard Steele
Willard H. Steele, Jr.
William A. Stem
Wm. G. Stephenson
Joseph H. Stickley
J. E. Strickland, Jr.
Harry A. Stone
Wesley Stoneburner
Mary E. Stroud
Michael M. Stump
Nat H. Swann, Jr.
Charles L. Suggs, Jr.
Chas. Ray Swift
George N. Taylor
Bernard Tepper
Jack Tepper
Marjorie Tepper
Guy K. Terrell
Chas. Roberts Thomas
Paul C. Thompson
Robt. C. Thompson
David H. Turner
A. S. Ulin
Louis Ulin
Minnie R. Vance
Wm. E. Van Order
Gus J. Vlasis
O. L. Von Canon
Muriel E. Von Werssowetz
Odon F. Von Werssowetz
James P. Wallace
Robert A. Waters
L. Spires Whitaker
Jesse L. Williams, Jr.
Julian M. Yood
George G. Young
Marion M. Young
Guy Zimmerman, Jr.
Joseph I. Zuckerman

Hixson

Nicholas B. Norris, Jr.
Robert J. Pitner

Lookout Mountain

James L. Caldwell
Thomas S. Long

Signal Mountain

Alton G. Hair
M. F. Langston
Arch Y. Smith

Soddy

Ann Hallett

HARDEMAN COUNTY

Bolivar

D. L. Brint
H. H. Barham
Charles Frost
Edwin M. Levy
B. F. McAnulty

Whiteville

Aubrey Richards

HARDIN COUNTY

Saltillo

Howard W. Thomas

Savannah

H. D. Blankenship, Jr.
R. B. Deberry
Thos. V. Roe
Howard W. Whitaker, Jr.
Thomas R. Williams

HAWKINS COUNTY

Church Hill

Warner L. Clark (Mbr. Sullivan-Johnson)
T. H. Roberson, Jr. (Mbr. Sullivan-Johnson)

Eidson

John M. Pearson

Rogersville

William E. Gibbons
Charles C. Johnson
W. H. Lyons

HAYWOOD COUNTY

Brownsville

H. L. Gilliand
Sue W. Johnson
David E. Stewart
John C. Thornton, Jr.
J. K. Welch, Jr.

HENDERSON COUNTY

Lexington

R. M. Conger
C. J. Huntsman
W. F. Jones, Jr.
Maurice N. Lowry
W. C. Ramer
J. C. Stripling

HENRY COUNTY

Paris

Arthur C. Dunlap
Ralph L. Eslick
R. Graham Fish
William P. Griffey, Jr.
I. H. Jones
E. P. Mobley, Jr.
Joe D. Mobley
John E. Neumann
W. G. Rhea
Wm. Gardner Rhea, Jr.
Kenneth G. Ross
J. Ray Smith
Thomas C. Wood

HICKMAN COUNTY

Centerville

Parker D. Elrod
Ogle Jones

HOUSTON COUNTY

Erin

O. S. Luton (Mbr. Montgomery Co.)
Albert J. Mitchum (Mbr. Montgomery Co.)

HUMPHREYS COUNTY

New Johnsonville

James John Lawson

Waverly

H C. Capps
Autry C. Emmert
W. J. McClure
Dorris A. Sanders
Joseph W. Stephens
Arthur W. Walker

JACKSON COUNTY

Gainesboro

E. Morgan Dudney
L. R. Dudney
Jack S. Johnson

JEFFERSON COUNTY

Dandridge

O. L. Merritt (Mbr. Hamblen Co.)

Jefferson City

David C. Cawood (Mbr. Hamblen Co.)
John W. Ellis (Mbr. Hamblen Co.)
Sam C. Fain (Mbr. Hamblen Co.)
Frank Milligan (Mbr. Hamblen Co.)
Estle P. Muncy (Mbr. Hamblen Co.)
J. B. Sams (Mbr. Hamblen Co.)

Strawberry Plains

Robert W. Creech (Mbr. Knox Co.)
R. M. Webster (Mbr. Knox Co.)

White Pine

E. Dale Allen (Mbr. Hamblen Co.)
E. R. Baker (Mbr. Hamblen Co.)

JOHNSON COUNTY

Mountain City

Paul J. Bundy
R. O. Glenn

KNOX COUNTY

Concord

Malcolm Cobb
R. H. Duncan

Corryton

A. D. Simmons

Fountain City

George L. Fillmore
A. L. Jenkins
F. H. Payne
J. Gordon Smith

Knoxville

Eugene Abercrombie
Alton Absher
N. D. Acree, Jr.
J. E. Acker, Jr.
T. Edward Acuff
Robert L. Akin
Charles M. Armstrong
Edmund B. Andrews
John W. Avera
Anne B. Avery
Robert M. Baker
O. E. Ballou
Floyd N. Bankston
Walter C. Beahm
Daniel F. Beals
Joe D. Beals
John Henry Bell
Spencer Y. Bell
Bruce B. Bellomy
Walter H. Benedict
Chas. W. Black
Joe W. Black, Jr.
Wade H. Boswell
H. O. Bourkard
Jacob T. Bradsher
Richard F. Brailey
Robert G. Brashear
Robert J. Brimi
Clayton M. Brodine
Robert T. Brooks
Fred F. Brown, Jr.
Horace E. Brown
Raymond C. Bunn
James A. Burdette
John H. Burkhart
Wm. G. Byrd
J. Ed Campbell
John W. Campbell
Clyde L. Capps
P. H. Cardwell
C. S. Carlson
Frederick W. Carr
L. G. Caylor
Jack Chesney
L. Warren Chesney
H. E. Christenberry, Jr.
K. W. Christenberry
W. F. Christenberry
H. S. Christian
C. L. Chumley
William E. Clark
Edward S. Clayton
H. G. Coker
I. Reid Collman
Edward D. Connor
David A. Corey
Dennis Coughlin, Jr.
M. L. Courtney
James B. Cox
John J. Craven
Miles S. Crowder
Joe C. Crumley
J. P. Cullum
H. K. Cunningham
C. Harwell Dabbs
Elvyn V. Davidson
Daniel Davis
Lloyd C. Davis
Martin Davis
Oliver DeLozier
R. V. DePue, Jr.
W. A. DeSautelle
A. W. Diddle
Sheldon Domm
Lucile Dooley
W. F. Dorsey
John H. Dougherty
James E. Downs
Mary Brock Duffy
James B. Dukes
Chas. R. Earnest, Jr.
E. M. Edington
Edward W. Ellis
James B. Ely
Frank A. Faulkner
Mark P. Fecher
George H. Finer
J. Marsh Frere, Jr.
Fred M. Furr
Wm. F. Gallivan
Jos. C. Gambill
Frank B. Gaylon, Jr.
Joseph I. Garcia, Jr.
Wm. H. Gardner
George L. Gee, Jr.
Robert H. Gentry
J. Vivian Gibbs
Carl E. Gibson
Robt. B. Gilbertson
Abner M. Glover
McChesney Goodall
Glenn D. Grubb
James R. Guyton, Jr.
T. F. Haase, Jr.
J. R. Hamilton, Jr.
Walter S. E. Hardy
James P. Harmon
David N. Hawkins
Eugene L. Haun
J. T. J. Hayes, Jr.
M. L. Hefley
N. A. Henderson
George G. Henson
Zelma L. Herndon
Howard K. Hicks
Hubert C. Hill
John R. Hill
Oliver W. Hill, Jr.
Victor Hill
R. L. Hobart, Jr.
David F. Hoey
Leon C. Hoskins
George Turner Howard, Jr.
Moses W. Howard
Fred E. Hufstedler
Perry M. Huggin
Charles C. Hutson
E. C. Idol
Geo. L. Inge
C. E. Irwin
Harry H. Jenkins
Joe Breese Johnson
Francis S. Jones
Paul L. Jourdan
Margaret E. Joyce
George M. Katibah
William M. Keeling
A. Pat Kelly
H. M. Kelso
A. Glenn Kennedy
John O. Kennedy
John E. Kesterson
Stacy H. Kinlaw
Victor H. Klein, Jr.
Lamar L. Knight
Willis F. Kraemer
Wm. G. Laing
A. Hobart Lancaster
Robert F. Lash
William M. Law
F. K. Lawson
Robert P. Layman
Robert S. Leach
Walter J. Lee, Jr.
R. J. Leffler
John H. Lesher
Robert A. Lewis
Felix G. Line
Thomas L. Lomasney
Frank London
Henry H. Long
Geo. S. Mahon
Margaret Maynard
Bruce R. McCampbell
M. D. McCullough
William E. McGhee
Joseph S. McMurry
Robert W. Meadows
Edwin E. Miller
William O'Miller
Foy B. Mitchell
Jack M. Mobley
Ralph H. Monger
J. L. Montgomery
John D. Moore, Sr.
John D. Moore, Jr.
Owen D. Moore
Travis E. Morgan
Robt. W. Morris, Jr.
J. F. Morrow
James E. Moseley
Arthur J. Muller
G. E. Murray
William S. Muse
James D. Myers
J. B. Naive
Carl A. Nelson, Jr.
John R. Nelson, Jr.
William A. Nelson
H. L. Neuenschwander
Robert W. Newman
Eugene P. Niceley
Hazel M. Nichols
Ralph G. Nichols
G. T. Novinger
Elvin B. Noxon
Kenneth A. O'Connor
R. A. Obenour
Harry K. Ogden
Homer C. Ogle
B. M. Overholt
Nicholas D. Pappas
Reese W. Patterson, Jr.
Robert F. Patterson, Jr.
Wm. L. Patterson
Charles G. Peagler
E. Converse Peirce
Herschel Penn
Jarrell Penn
H. Dewey Peters
B. F. Peterson
Ira S. Pierce
Cecil E. Pitard
W. W. Potter
William F. Powell
Bruce R. Powers
Wilson W. Powers
H. Hammond Pride
Thomas C. Prince, Jr.
James C. Prose
John A. Range
Joe L. Raulston
Freeman L. Rawson
W. Gilmer Reed
Wm. H. Reeder
James P. Richards
Paul D. Richards
N. G. Riggins
Frank T. Rogers
Wm. K. Rogers
Kenneth B. Rule
Richard C. Sexton
Digby G. Seymour
J. H. Saffold
Karl T. Sammons
Alex B. Shipley
Elton E. Shouse, Jr.
Kenneth E. Shoemaker
E. Chas. Sienknecht
Frank J. Slemons
Chas. C. Smeltzer
E. B. Smith
Joe T. Smith
Vernon I. Smith
W. E. Smith
John R. Smoot
James L. Southworth
Bernard G. Stall, III
J. Hooper Stiles, Jr.
Thos F. Stevens
J. M. Stockman
Wm. K. Swann, Jr.
E. L. Tauxe
Dale A. Teague
Dan R. Thomas
Philip C. Thomas
Wm. M. Tipton
Lucian W. Trent
Geo. M. Trotter
M. Frank Turney
Andrew S. Wachtel (Mbr. Roane-Anderson Co.)
Thomas W. Vance
Norma B. Walker
Calvin R. Wallace
Sidney L. Wallace
Donald E. Wallis
C. L. Walton

R. G. Waterhouse
David H. Waterman
J. H. Waters, Jr.
Glenn F. Watts
Alvin J. Weber, Jr.
Roy A. Wedekind, Jr.
Arthur W. Welling
Fred West
Herbert F. White
Roger E. White
Richard L Whittaker
Robert B Whittle
Richter H. Wiggall
Richard B. Willingham
Lee L. Williams
M. L. Williams
G. A. Williamson, Jr.
Perry J. Williamson
Leon J. Willien
Stephen G. Wilson, Jr.
John H. Wolaver
R. B. Wood
James P. Worden
O. Horace Yarberry, Jr
Vernon H. Young
Vincent T. Young
Eugene G. Zachary
Charles R. Zirkle
George A. Zirkle, Jr.

Mascot

John C. Adler
Hubert Howard Vesser, Jr.

Powell Station

L. F. Cruze

LAKE COUNTY

Ridgely

W. B. Acree

Tiptonville

J. R. Holefield
E. B. Smythe

LAUDERDALE COUNTY

Halls

J. T. Elmore
J. G. Olds

Ripley

A. J. Butler, Jr.
James Howard Ragsdale
Wm. H. Tucker
P. W. Walker, Jr.
Claude R. Webb

LAWRENCE COUNTY

Lawrenceburg

V. H. Crowder
W. O. Crowder
J. W. Danley
Boyd P. Davidson
Norman Henderson
James C. Hudgins, Jr.
L. B. Molloy
V. L. Parrish
W. S. Sutherland
Carson E. Taylor

Loretto

Ray E. Methvin
M. H. Weathers

LEWIS COUNTY

Hohenwald

Edgar D. Akin
Don L. Gaines
B. J. Smith

LINCOLN COUNTY

Fayetteville

Anne U. Bolner
L. M. Donaldson
William D. Jones
Ben H. Marshall
Robert E. McCown
J. V. McRady
B. G. Norwood
T. A. Patrick, Jr.
C. D. Toone
Paul E. Whittemore

LOUDON COUNTY

Lenoir City

Harold D. Freedman (Mbr. Knox Co.)

*In Service

Walter C. Shea, Jr.
R. V. Taylor (Mbr. Knox Co.)
A. Neal Ward (Mbr. Knox Co.)

Loudon

Corrie Blair (Mbr. Knox Co.)
Samuel A. Harrison (Mbr. Knox Co.)
W. B. Harrison (Mbr. Knox Co.)
Wm. T. McPeake (Mbr. Knox Co.)
J. R. Watkins (Mbr. Knox Co.)

MACON COUNTY

Lafayette

C. C. Chitwood, Jr.
Jack C. Clark
E. M. Froedge
Max E. Painter
Earl F. Rich

MADISON COUNTY

Bemis

R. T. Tucker, Jr.
Allen N. Williams, Jr.

Jackson

Harold K. Alsobrook
Thomas K. Ballard
R. J. Barnett
G. H. Berryhill
Jack H. Booth
Wm. H. Brooks
Swan Burrus
Swan Burrus, Jr.
Hughes Chandler
Wm. G. Crook
G. B. Dodson, Jr.
J. E. Douglass
Roy A. Douglass, Jr.
Clarence Driver
E. W. Edwards
Blanche Somerville Emerson
Blair D. Erb
Fred M. Friedman
Oliver H. Graves
W. W. Harrison
Geo. Harvey, Jr.
Bobby C. Higgs
Robert S. Hill
C. L. Holmes
Ben House
G. B. Hubbard
Chester K. Jones
G. Frank Jones
Leland M. Johnston
Duval H. Koonce
James D. Lane
James A. Langdon, Jr.
Harold T. McIver
Robert B. Mandle
A. L. Middleton
Jesse A. Miller
Frank A. Moore
H. N. Moore
A. J. Mueller
Lamb B. Myhr
R. M. Neudecker
George Pakis, Jr.
L. G. Pascal, Jr.
James A. Phillips
John G. Riddler
Robert J. Smith
Charles C. Stauffer
James L. Thomas
J. R. Thompson, Jr.
S. Allen Truex
Charles H. Yebb
F. E. Williamson, Jr.
George B. Wyatt
Paul E. Wylie
H. R. Yarbro

MARION COUNTY

Jasper

H. G. McMillan (Mbr. Hamilton Co.)

South Pittsburg

Horace E. Elmore (Mbr. Hamilton Co.)
J. B. Havron (Mbr. Hamilton Co.)
William Headrick, Jr. (Mbr. Hamilton Co.)
Hiram B. Moore (Mbr. Hamilton Co.)
Eugene Ryan (Mbr. Hamilton Co.)
Viston Taylor, Jr. (Mbr. Hamilton Co.)

Whitwell

Cleo Chastain (Mbr. Hamilton Co.)
Wm. G. Shull (Mbr. Hamilton Co.)

MARSHALL COUNTY

Lewisburg

Kenneth P. Brown
J. T. Gordon
Hoyt C. Harris
J. C. Leonard
James W. Limbaugh, Jr.
Kenneth J. Phelps
Wm. S. Poarch
J. F. Rutledge
Wm. L. Taylor
W. A. Walker
Eugene S. Wolcott

MAURY COUNTY

Columbia

D. B. Andrews
Wendell C. Bennett
Charles R. Brite
Mildred Casey
William N. Cook
Eldon S. Dummit, Jr.
Edward Ewton
Wm. G. Fuqua
C. C. Gardner, Jr.
Daniel R. Gray, Jr.
H. J. P. Harding, Jr.
John W. Harris
Valton C. Harwell, Jr.
Harry C. Helm
Wm. N. Jernigan
Ralph Kustoff
Ambrose M. Langa
Robin Lyles
Geo. R. Mayfield, Jr.
Clay R. Miller
Lawrence R. Nickell
Edwin K. Provost
B. J. Vinson
Leon S. Ward
J. W. Wilkes, Jr.
Thomas K. Young, Jr.

Mt. Pleasant

Allyn M. Lay
Taylor Rayburn, Jr.
J. O. Williams

McMINN COUNTY

Athens

W. R. Arrants
Charles T. Carroll
L. D. Curtner
William M. Davis
R. W. Epperson
C. O. Foree
W. Edwin Foree
R. Danny Hays
Robert G. Hewgley
Milnor Jones
John H. Lillard
J. A. Powell, Jr.
Helen M. Richards
L. H. Shields
Robert W. Trotter

Englewood

J. F. Cleveland

Etowah

Wm. K. Frye
S. Boyd McClary, Jr.
S. B. McClary, III
John C. Sharp
H. P. Whittle

McNAIRY COUNTY

Selmer

T. N. Humphrey
Harry L. Peeler
James H. Smith
Montie E. Smith, Jr.

MONROE COUNTY

Madisonville

R. C. Kimbrough
F. Houston Lowry
Horace M. McGuire

Sweetwater

J. H. Barnes
Joe H. Henshaw
D. F. Heuer, Jr.
T. A. Lowry
Joe K. Wallace
J. E. Young

Vonore

Troy Bagwell (Mbr. Knox Co.)

MONTGOMERY COUNTY

Clarksville

Edward R. Atkinson
J. F. Bellenger
Carlos B. Brewer
F. D. Coleman
E. P. Cutter
Sam M. Doane, Jr.
Dawson Durrett, Jr.
M. M. Green
V. H. Griffin
John Griffith
B. T. Hall
J. E. Hampton
T. K. Hepler
Bryan T. Iglehart
Howard R. Kennedy
R. C. Koehn
J. H. Ledbetter, Jr.
William G. Lyle
F. J. Malone, Jr.
James L. McKnight
F. C. Petty
Jack Ross
A. F. Russell
D. R. Shipley
Marion E. Spurgeon
Charles A. Trahern
Harold V. Vann
Troy A. Walker
William H. Wall, Jr.
Paul E. Wilson
R. M. Workman

MOORE COUNTY

Lynchburg

F. Harlan Booher (Mbr. Lincoln Co.)

OBION COUNTY

Kenton

Alden H. Gray (Mbr. Consolidated Counties)

Obion

W. S. Myers

Troy

Chesley H. Hill

Union City

J. Kelly Avery
M. A. Blanton, Jr.
Harold D. Bulter
H. W. Calhoun
Joe Campbell
Wm. N. Carpenter
Robert E. Clendening
B. O. Garner
Dan C. Gary
R. L. Gilliam, II
Lawrence W. Jones
E. P. Kingsbury, Jr.
R. G. Latimer, Jr.
E. McCall Morris
James W. Polk
Malcolm T. Tipton
O. A. Zeller, Jr.

OVERTON COUNTY

Livingston

M. E. Clark
H. B. Nevans
Denton D. Norris
W. G. Quarles, Jr.
J. M. Roe

PERRY COUNTY

Linden

B. L. Holladay
Gordon H. Turner, Jr.

POLK COUNTY

Copperhill

H. H. Hyatt (Mbr. Hamilton Co.)
J. T. Layne (Mbr. Hamilton Co.)
W. C. Zachary, Jr. (Mbr. Knox Co.)

Ducktown

Wm. R. Lee (Mbr. Hamilton Co.)

PUTNAM COUNTY

Algood

J. T. Moore, Jr.

Cookeville

Jack L. Clark
Katherine Goff Crawford
J. T. Deberry
Wm. C. Francis
Kenneth L. Haile
Wm. A. Hensley, Jr.
Robert V. Larrick
Jere W. Lowe
D. W. Mattson
Thurman Shipley
Wm. S. Taylor
J. Fred Terry
Claud M. Williams

Monterey

C. A. Collins
T. M. Crain

RHEA COUNTY

Dayton

Lester F. Littell (Mbr. Hamilton Co.)
J. J. Rodgers (Mbr. Hamilton Co.)
W. A. Thomison (Mbr. Hamilton Co.)

Spring City

Conrad L. Grabeel (Mbr. Roane Co.)

ROANE COUNTY

Harriman

A. Julian Ahler
Thomas L. Bowman
Elbert C. Cunningham
Fred J. Hooper
Lewis T. Howard
H. Stratton Jones
L. A. Killeffer

Kingston

Carolyn A. Beard
P. R. Rothrock
Nat Sugarman

Oak Ridge

(See Anderson Co.)

Oliver Springs

S. J. Van Hook

Rockwood

Thomas A. Fuller
Robert S. Hicks
Jack Lindsay
John V. Snodgrass, Jr.

ROBERTSON COUNTY

Cedar Hill

R. H. Elder

Cross Plains

Ora W. Ramsey

Ridgetop

E. E. Botsford

Springfield

J. W. Atwood
Sue C. Atwood
Warren G. Hayes
John M. Jackson
C. M. Looney
J. R. Quarles
N. H. Raines
W. P. Stone
John B. Turner
Raymond H. Webster
J. E. Wilkison

RUTHERFORD COUNTY

Murfreesboro

Carl E. Adams
Joseph C. Bailey
W. Stanley Barham
J. T. Boykin
John M. Bryan
John F. Cason
William E. Coopwood
B. S. Davison, Jr.
David T. Dodd
Paul C. Estes
Francis M. Fesmire
R. James Garrison
S. C. Garrison, Jr.
T. Gilbert Gordon
Richard E. Green
A. E. Harvey
Sam H. Hay
R. D. Hollowell
Kenneth D. Hunt
J. Capers Jones
J. K. Kaufman
Lois M. Kennedy
Joseph C. Knight
Donald L. LeQuire
Chas. W. Lewis
Fred R. Lovelace
M. B. Murfree, Jr.
Eugene P. Odom
Sam H. Patterson
James A. Payne
Robert G. Ransom
Creighton Rhea
B. W. Rawlins
Robert S. Sanders
Wm. M. Savage
Wm. W. Shacklett
Charles Smith
W. Radford Smith
Olin Williams, Jr.
J. Howard Young, Jr.

Smyrna

Robert H. Hackman

SCOTT COUNTY

Oneida

M. F. Frazier
Maxwell E. Huff
H. M. Leeds
Roy L. McDonald
Milford Thompson

SEQUATCHIE COUNTY

Dunlap

Leslie D. Ekvall (Mbr. Hamilton Co.)
Charles Graves (Mbr. Hamilton Co.)

SEVIER COUNTY

Gatlinburg

Ralph H. Shilling
Charles E. Waldroup

Sevierville

Troy J. Beeler*
R. A. Broady
John M. Hickey, Jr.
R. A. McCall
Chas. L. Roach
Cecil D. Rowe
Robert F. Thomas
Hilda Jane Walters

Seymour

James B. Bell (Mbr. Knox. Co.)

SHELBY COUNTY

Arlington

Malcolm A. Baker

Collierville

John E. Outlan

Cordova

L. W. Diggs

Forest Hill

J. E. Clark

Germantown

John T. Carter, Jr.

Memphis

Sara E. Abbott
Robert F. Ackerman
John Q. Adams
L. H. Adams
Ralph M. Addington
Henry L. Adkins
Justin H. Adler
Lorin E. Ainger
Garabed H. Aivazian
Albert M. Alexander
James E. Alexander
Chester G. Allen
F. Pearson Allen
Frank S. Allen
Robert G. Allen
F. H. Alley
Jacob Alperin
James L. Alston
Lawrence D. Amick
J. P. Anderson
Lewis D. Anderson
Sam B. Anderson, Jr.
William F. Andrews
Donald N. Anshanslin
D. H. Anthony
Robert A. Anthony
John W. Apperson, Jr.
J. M. Aste
H. E. Atherton
Leland L. Atkins
Edgar L. Austin
James M. Austin (Mbr. Scott Co.)
Richard L. Austin
W. W. Aycock
J. C. Ayres, Jr.
J. Earl Baker
John W. Baird
George F. Bale
Leon Thomas Banakas
Elizabeth Bell Barker
George L. Barker
James B. Barker
Aden W. Barlow, Jr.
James R. Barr
Jerome N. Barrasso
John M. Barron
G. H. Bassett
John C. Beard, Jr.
Emmett D. Bell, Jr.
Samuel G. Bell
Steven H. Bell
Arthur L. Bellott, Jr.
Hal E. Bennett
B. F. Benton
Leonard Berg
Wm. M. Berton
J. M. Bethea
Richard O. Bicks
Albert W. Biggs
James D. Biles, Jr.
E. S. Birdsong, Jr.
C. R. Bishop
W. A. Bisson
W. T. Black, Jr.
Basil A. Bland, Jr.
Breen Bland
Phil B. Bleecker
Herbert Blumen
Laurence Blumen
Harry B. Blumenfeld
Henry A. Boldt, Jr.
Robert F. Bonner
Howard A. Boone
James L. Booth
C. Whitman Borg
R. L. Bourland
Earl P. Bowerman
H. B. Boyd
Boyer M. Brady, Jr.
Winston Braun
R. R. Braund
James T. Bridges
Carey Bringle
Louis Goodno Britt, Jr.
D. A. Brody
Joseph H. Brock
Maury Bronstein
James S. Brown
Lawrence E. Brown
Harry G. Bryan
Malvern T. Bryan
James W. Bryant
W. D. Burkhalter
Richard D. Burns
Wm. B. Burrow
Orlin D. Butterick, Jr.
James S. Byas
Shed H. Caffey
R. A. Calandruccio
Edward P. Caldwell
M. K. Callison
E. Guy Campbell
Ernest A. Canada
Dee James Canale
Dominic J. Cara, Jr.
Bland W. Cannon
George M. Cannon
Robert S. Caradine, Jr.
D. M. Carr
David S. Carroll
Dan Carruthers, Jr.
Harvey W. Carter
L. L. Carter
A. H. Chamberlain, Jr.
J. M. Chambers, Jr.
W. C. Chaney
Ewin S. Chappell
Fenwick W. Chappell
R. E. Ching
Joseph M. Chisolm
Glenn M. Clark
James A. Clark, Jr.
Charles L. Clarke
Hugh Adams Clarke
E. W. Cocke, Jr.
Lawrence L. Cohen
F. H. Cole
B. C. Collins
James H. Collins
Frank H. Collins
E. D. Connell
John P. Conway
George A. Coors
Giles A. Coors
G. Daniel Copeland
Arthur A. Cox
Erwin M. Cox
John E. Cox
Culver C. Craddock*
Rufus E. Craven
E. A. Crawford
S. E. Crawford
Loyd V. Crawford
P. T. Crawford
A. H. Crenshaw
Thomas K. Creson, Jr.
Robert N. Crockett, Jr
C. V. Crosswell
Terry P. Cruthirds
James W. Culbertson
Alvin J. Cummins
Ray E. Curle
Richard F. Daly
Orin L. Davidson
Harry Davis
Norman H. Davis
J. M. Davis
Robert A. Davison*
Charles J. Deere
Hubert L. Dellinger, Jr.
V. J. Demarco
McCarthy DeMere
Richard DeSaussure
Alice R. Deutsch
Melvin Wayne DeWees
J. L. Dies
Phillip H. Dirmeyer
C. E. Dismukes
John B. Dorian, Jr.
Wm. H. L. Dornette
Thomas G. Dorrity
Chas. V. Dowling
Paul T. Drenning
Horton DuBard
Marion Dugdale
W. D. Dunavant
James T. Duncan, Jr.
Hamel B. Eason
Leslie B. Eason*
Elmer S. Eddins
Allen S. Edmonson
Joseph A. Elgart
E. U. Epstein
Cyrus C. Erickson
James N. Etteldorf
C. Barton Etter
O. A. Eubanks, Jr.
J. D. Evans
M. L. Evans
B. E. Everett, Jr.
William H. Fancher
Cornell C. Faquin, Jr.
Harold G. Farley
Turley Farrar
Cyrus C. Farrow, Jr.
Harold Feinstein
Daniel F. Fisher
James B. Flanagan
A. R. Flowers, Sr.
Nancy C. Flowers
Max Foner
Hugh Francis, Jr.
Jerry Thomas Francisco
W. Edward French
Burt Friedman
Eugene W. Gadberry
James T. Galyon
Joseph C. Garbarini, Jr.
Herbert C. Gardner
Edward L. Gegan
Elsbeth Gehorsam
Lewis W. George
O. S. Gibbs
D. Frederick Gioia
C. E. Gilliespie
John J. Gilluly
B. H. Ginn
George E. Gish
Thomas C. Gladding
Willard G. Glass
Fred A. Goldberg
Ralph Goldman
D. W. Goltman
J. O. Gordon
Martha Ferguson Goss
H. B. Gotten
Nicholas Gotten
Robert D. Gourley
Thomas E. Goyer
W. H. Gragg, Jr.
John F. Gratz, Jr.
Lester R. Graves, Jr.
Lloyd M. Graves
H. D. Gray
Arthur W. Green
C. R. Green
Jack Greenfield
A. J. Grobmyer, Jr.
Pauline Grodsky
Fred T. Grogan, Jr.
Morton L. Gubin
Nobel Guthrie
James S. Haimsohm
Hollis H. Halford, Jr.
Jack R. Halford
Emmett R. Hall, Jr.
V. A. Hall
Margaret A. Halle
Ralph S. Hamilton
J. F. Hamilton
Wm. T. Hamilton
John B. Hamsher
Ethel Ashton Harrell
Mallory Harwell
Howard B. Hasen
Fred Erdman Hatch, Jr.
A. Kenneth Hawkes
C. D. Hawkes
Jean M. Hawkes
C. L. Hay
L. K. Haynes
Thomas G. Head
Louie C. Henry
A. L. Herring
George B. Higley
George B. Higley, Jr.
Fontaine S. Hill
James M. Hill
E. E. Hines
John Lewis Hohson
W. K. Hoffman, Jr.
M. W. Hoelban
Thomas L. Holliday*
I. E. Holmes
John Pierce Holman, Jr.
David H. Holt
Sherman H. Hoover
Leo G. Horan
Arthur E. Horne
Glenn E. Horton
Hubert L. Hotchkiss
C. H. Householder
John L. Houston
Jector S. Howard, Jr.
William T. Howard
James G. Hughes
John D. Hughes
Max O. Hughes
Robert R. Hughes
John V. Hummell
Sam E. Hunter
W. E. Hurt
J. H. Ijams
C. W. Ingle
A. J. Ingram
G. W. Stanley Ish, Jr.
Charles E. Jabhour
Thos. M. Jackson
H. J. Jacohson
Hal P. James
Oliver C. Jeffers
Geo. Wm. Jenkins
Anthony P. Jerome
J. Don Johnson
Halvern H. Johnson
A. M. Jones
George P. Jones, Jr.
Joe Paul Jones
R. Luby Jones
Sidney D. Jones, Jr.
Robert G. Jordan, Jr.
A. Wilson Julich
Edward Steven Kaplan
Jerry Kaplan
Stanley B. Kaplan
Lyman A. Kasselberg
Harvey L. Kay, Jr.
Robert C. Kee*
Marvin M. Keirns
Ernest G. Kelly
Keith B. Kennedy
Henry G. Kessler
W. F. Kimmell
Robert P. Kline
Charles M. King
J. C. King
Howard H. Kitchens
W. F. Klotz
F. H. Knox, Jr.
Robert L. Knox
Sheldon B. Korones
Alfred P. Kraus
Bernard M. Kraus
Melvin M. Kraus
Cary M. Kuykendall
N. W. Kuykendall, Jr.
J. Warren Kyle
H. Z. Landis
C. G. Landsee
Herbert G. Lanford
Frank A. Latham
M. W. Lathram
A. E. Laughlin
H. G. La Velle, Jr.
Robert E. Lawson
Ling Hong Lee
Melvyn A. Levitch
Gilbert J. Levy
L. C. Lewis
P. M. Lewis
Alys H. Lipscomb
Geo. R. Livermore, Jr.
D. G. Lockwood
Charles E. Long
William E. Long
J. H. Lotz
J. C. Lougheed
Carruthers Love
Varna P. Love
Martha A. Loving
George S. Lovejoy
William M. Lovejoy
Edward H. Mahry
W. F. Mackey
Ray W. Mackey
Holt B. Maddox
James K. Maguire
Battle Malone
T. P. Manigan
John C. Mankin
Philip M. Markle
Carl D. Marsh
C. H. Marshall
George W. Marten
Tinnin Martin, Jr.
A. D. Mason, Jr.
Wm. W. Mason
Gordon L. Mathes
O. S. Matthews
William P. Maury, Jr.
R. F. Mayer
Wm. W. Mayers
R. F. Mayer
L. H. Mayfield
John T. McAskill
Robert P. McBurney
Chas. B. McCall
John W. McCall
John G. McCarter, Jr.
J. J. McCaughan
B. F. McCleave
James G. McClure
D. C. McCool
R. B. McCormick
L. K. McCown
E. F. McDaniel, Jr.
John L. McGee, Jr.
Eugene E. McKenzie, Jr.
J. Wesley McKinney
A. M. McLarty
B. E. McLarty
Richard P. McNelis
George McPherson
Elise T. McQuiston
A. H. Meyer, Jr.
Robert M. Miles
Lee W. Milford, Jr.
C. W. Miller, Jr.
Fox Miller
George L. Miller, Jr.
Harold R. Miller
James B. Miller (Mbr. Davidson Co.)
Joseph H. Miller
Richard A. Miller
Richard Braun Miller
Richard W. Miller
Dan C. Mills
David M. Mills
Geo. T. Mills
J. Purvis Milnor, Jr.
I. C. Minkin
B. G. Mitchell
E. D. Mitchell, Jr.
F. T. Mitchell
W. R. Mitchum
E. C. Mohely
J. C. Mobely, Jr.
Wm. L. Moffatt
E. M. Molinski
Rslph H. Monger, Jr.
David F. Moore
Fontaine B. Moore, Jr.
James A. Moore
Marion R. Moore
Moore Moore, Jr.
Wm. H. Morse
Ralph F. Morton
Wm. H. Moshier
Henry Moskowitz
J. P. Moss
T. C. Moss
R. Lyle Motley
Kenneth J. Munden
Francis Murphey
Walter H. Murphy
W. F. Murrah, Jr.
Ronald H. Myers
John P. Nash
Chas. Lea Neely, Jr.
John C. Newton
Thomas W. Nichols
George C. Nichopoulis
Eugene R. Nobles, Jr.
John Davis Nofzinger
Wm. L. Northern, Jr.
D. W. Oelker
Evelyn Bassi Ogle
L. C. Ogle
W. S. Ogle
Claude D. Oglesby
Charles B. Olim
J. C. Orman
Phil E. Orpet, Jr.
Wm. J. Oswald
Alfred H. Page
Gene R. Page
Joseph B. Parker, Jr.
Charles W. Parrott, Jr.
Samuel Paster
Morris Pasternack
James W. Pate
Rushton E. Patterson,
Sam Polk Patterson
Bernard S. Patrick
Raphael N. Paul
G. E. Paullns, Jr.
Iris A. Pearce
Phillip A. Pedigo*
John D. Peeples, Jr.
B. L. Pentecost
Maurice C. Pian, Jr.
John D. Piggott
W. H. Pistole
James A. Pitcock
Samuel Ellis Pitner, Jr.
Gerald I. Plitman
Mary Frances Poe
R. M. Pool
A. R. Porter, Jr.
C. H. Porter
Huey H. Porter
James Howard Price
Stephen A. Pridgen
Wm. R. Pridgen
Edward McCall Priest
Helen Prieto
L. C. Prieto
Billie Harold Putman
S. L. Raines
Robert L. Rainey
W. T. Rainey
Darwin W. Rannels
R. Beverly Ray
John J. Redmon
Edward W. Reed
Robert C. Reeder
Harvey C. Reese, Jr.
H. Eugene Reese
J. R. Reinherger
John M. Reisser, Jr.
W. E. Rentrop
Walter A. Rentrop
Hal S. Rhea
Chas. R. Riggs
George A. Riley
M. J. Roach, Jr.
H. C. Roberts
James Thos. Robertson
J. A. Roane
S. Gwin Robbins
C. G. Robinson
James A. Robinson
W. W. Robinson
W. P. Rochelle
Gordon K. Rogers
E. Wm. Rosenberg
Nathaniel E. Rossett
William A. Royer
Joseph A. Rothschild
Robert M. Ruch
Walter A. Ruch, Jr.
H. G. Rudner
Henry G. Rudner, Jr.
Richard Paul Rudnicki
John W. Runyan, Jr.
J. M. Russell, Jr.
P. B. Russell, Jr.
Fred P. Sage
Nathan C. Salky
Lehman C. Sammons
L. C. Sanders
S. H. Sanders
W. T. Satterfield
W. T. Satterfield, Jr.
A. F. Saville, Jr.
S. J. Schaeffer, Jr.
David E. Scheinberg
Betty J. Schettler
Glen P. Schoettle
Jerome Schroff
P. C. Schreier
Elmer C. Schultz
Joseph L. Scianni
Benjamin F. Scott
C. B. Scott
Edwin L. Scott
Joseph M. Scott
James L. Seale
L. L. Sebulsky
Jack Segal
M. P. Segal
E. C. Segerson
M. B. Seligstein
Elizabeth F. Sinclair
R. E. Semmes
Norman D. Shapiro
John L. Shaw
Martin C. Shea, Jr.
J. J. Shea, Jr.
Wm. E. Sheffield
James R. Shelton
Roger T. Sherman
Leslie Bowlin Shumake
Saul Siegel
Michael N. Silverman
Teresa Silverman
James C. H. Simmons
W. L. Simpson
Elizabeth F. Sinclair
Paul R. Sissman
Edward F. Skinner
Henry T. Slawson, Jr.
Avron A. Slutsky
Alvin E. Smith
Hugh Smith
O. E. Smith
Vernon I. Smith, Jr.
Frank W. Smythe, Jr.
Edward D. Snyder
John J. Solm
Phineas J. Sparer
J. S. Speed
Wm. O. Speight, Jr.
Eugene J. Spiotta
Douglas H. Sprunt
C. Cooper Stanford
Thos. V. Stanley, Jr.
Ray G. Stark
C. Harold Steffee
William P. Stepp
Thomas N. Stern
Cleo W. Stevenson
E. M. Stevenson
E. N. Stevenson
M. J. Stewart
W. R. C. Stewart† (Mbr. Davidson Co.)
S. Fred Strain
S. F. Strain, Jr.
Henry T. Stratton
A. N. Streeter
Robt. J. Stubblefield
Robert L. Summitt
Michael J. Sweeney
E. W. Sydnor, Jr.

*In service
†Residency

Hall S. Tacket
B. S. Talley
Norman Taube
Finis A. Taylor
James A. Taylor
Robert C. Taylor
W. W. Taylor
Morton J. Tendler
Amos Lee Thomas
Don R. Tielens
Wm. C. Threlkeld
Robert Edwin Tooms
A. B. Tripp
Merlin L. Trumbull
I. Frank Tullis, Jr.
H. K. Turley, Jr.
John C. Turley
P. A. Turman
R. B. Turnbull
Steve H. Turnbull, Jr.
Henry B. Turner
Arliss H. Tuttle
Austin R. Tyrer, Jr.
Wm. T. Tyson, Jr.
Jefferson D. Upshaw, Jr.
Robert A. Utterback
Edmund Utkov
E. A. Vaccaro
Helen Key Van Fossen
C. F. Varner
Walter E. Verner
Leonard J. Vernon
Sidney D. Vick
John R. Vincent
James W. Walker
Richard H. Walker
Richard P. Walker
H. W. Hamilton Walker
W. White Walker, Jr.
Fred C. Wallace
James A. Wallace
Peter B. Wallace
Maurice E. Waller
Thomas L. Waring
O. S. Warr, Jr.
W. W. Watkins
J. J. Weems
Alva B. Weir, Jr.
J. D. West
T. H. West
Thos. Jefferson White,
William G. White
J. E. Whiteleather
Gene L. Whitington
W. L. Whitemore
W. Wiggins Wilder
Walter L. Wilhelm
Ephriam B. Wilkinson
H. G. Williams
Paul H. Williams
Gordon L. Wills
John R. Wills
Harry W. Wilson
Harwell Wilson
James E. Wilson
John M. Wilson
Andrew A. Windham
J. B. Witherington
Matthew W. Wood
Richard L. Wooten
C. W. Woolley
Howell D. Woodson
C. H. Workman, Jr.
Earle L. Wrenn, Jr.
J. Leo Wright
L. D. Wright, Jr.
Warren K. Wright
Lawrence D. Wruble
*Residency

Henry Wurzburg
C. F. Yates
Jack G. Young
John D. Young, Jr.
Bernard M. Zussman

Millington

Paul J. Batson, Jr.
A. J. Cates
Fletcher Goode
Billy W. King

SMITH COUNTY

Carthage

Hugh E. Green
D. Gordon Petty
Frank T. Rutherford, Jr.
Thayer S. Wilson

STEWART COUNTY

Albert R. Lee

SULLIVAN COUNTY

Blountville

J. W. Erwin
Robert G. Patrick

Bristol
(Tenn.-Va.)

Harry W. Bachman
Frank S. Blanton, Jr.
Talmadge Buchanan
W. C. Carreas
N. J. Chew
Bennett Cowan
A. S. Crawford
Wm. S. Credle
Wm. M. Gammon
Walter R. Gaylor
Thomas W. Green
Waverly S. Green
Wm. C. Grigsby
Chas. J. Harkrader
Ellis U. Harr
Basil T. Harter
Wm. H. Johnson
King A. Jamison
Tom H. Kuhnert
J. O. Marcy
Fred C. McCall
George W. McCall
James G. McFaddin
Joe E. Mitchell
B. W. Mongle
Marion J. Murray, Jr.
Floyd E. Nicley
I. E. Phillips
Robert A. Repass
W. F. Schmidt
Hal S. Stubbs
F. W. Sutterlin
J. F. Thackston
D. D. Vance
Frederick Vance, Jr.
Cleland C. Blake
S. S. Whitaker
H. P. Williams

Kingsport

M. J. Adams
Robert N. Alexander
Edmond L. Alley
Donald W. Bales
Cleland C. Blake
Robert L. Banner
James H. Boles
Harlis O. Bolling
Paul F. Brookshire
H. J. Brown
Robert Hyatt Brown
J. Sam Brown
D. G. Burmeister
W. B. Camp
Edward K. Carter
D. P. Chance
Robt. C. Christensen
L. C. Cox
Paul W. Cox
John L. Dallas
Floyd Davis
Robert D. Doty
W. C. Eversole
Wm. Allen Exum
Frank S. Flanary
J. Frank Fleming
Billy N. Golden
Elmer A. Green
James J. Hamilton
William Harrison, Jr.
Marshall D. Hogan, Jr.
R. J. Jarvis
Robert H. Jernigan
Malcolm M. Jones, Jr.
Robert C. Jones
Robert Keith
Kenneth R. Kiesan
Joseph A. King
Kenneth C. Lynch
Robert E. Maddox
Joseph K. Maloy
Eugene M. Maul
Annabel McConnell
Frederick G. McConnell
John R. McDonough
H. J. Michals
John H. Moore
John E. Munal
James B. Nichols, Jr.
Wade Nowlin*
Frank B. O'Connell, Jr.
R. E. Pearson
Jacob R. Pierce
J. S. Powers, Jr.
Norman S. Propper
J. Shelton Reed
Nathan A. Ridgeway, Jr.
Clay A. Renfro
H. W. Rule
W. E. Scribner
Robert H. Shipp
Merrit B. Shobe
J. E. Shull
Lyle R. Smith
Warren Y. Smith
R. T. Strang
Wm. P. Templeton
James S. Vermillion
Yilliam B. Walters
John B. Warren
J. Dwight Whitt
H. Jackson Whitt
W. A. Wiley
J. E. Williams

SUMNER COUNTY

Gallatin

Joseph R. Blackshear
Charles M. Cowden*
W. M. Dedman
Halden W. Hooper
Wm. N. Massey
Robert A. Moore
Clarence R. Sanders
Walter H. Stephenson
James R. Troutt, Jr.
R. C. Webster
John B. Wallace

Hendersonville

W. Gordon Doss
Charles M. Gillitt

Portland

Albert G. Dittes
James T. Ladd
Ralph W. Simonton, Jr.

Westmoreland

Thomas F. Carter

TIPTON COUNTY

Covington

Warren A. Alexander
Travis L. Bolton
N. L. Hyatt
J. S. Ruffin, Jr.
H. S. Rule
James D. Witherington

Munford

H. W. Vaughan
A. S. Witherington, Jr.

TROUSDALE COUNTY

Hartsville

Edgar K. Bratton (Mbr. Smith Co.)
Ira N. Kelley (Mbr. Sumner Co.)

UNION COUNTY

Maynardville

John A. Marsee

UNICOI COUNTY

Erwin

Robert M. Glasgow
R. H. Harvey
N. E. Hyder
H. L. Monroe

VAN BUREN COUNTY

Spencer

Margaret Wrenn Rhinehart

WARREN COUNTY

McMinnville

Wallace Bigbee
C. M. Clark
J. P. Dietrich
J. Franklin Fisher
J. C. Gaw
W. R. Gaw
James L. Moore
C. E. Peery, Jr.
J. E. Phillips
B. C. Smoot

WASHINGTON COUNTY

Johnson City

Sidney M. Afifi
C. E. Allen
William P. Bailey, Jr.
Justin C. Blevins
J. R. Bowman
E. T. Brading
Duane C. Budd
G. J. Budd
E. M. Campbell
Lewis F. Cosby, Jr.
Alfred N. Costner
Douglass H. Crockett
Horace P. Cupp
R. G. Dennis
H. B. Dearman
Burgin Dossett, Jr.
T. J. Ellis
C. W. Friberg
Byron W. Frizzell
Lyman A. Fulton
Newton F. Garland
Lawrence E. Gordon, Jr.
Clarence E. Goulding
Charles S. Gresham
James O. Hale
Ben D. Hall
Walter D. Hankins
Charles H. Hillman
Sam Huddleston
John F. Lawson
Carroll H. Long
C. G. Lyons
Gordon L. Mason
W. T. Mathes, Jr.
T. P. McKee
J. B. McKinnon
Walter A. McLeod
E. A. Meeks
Ray W. Mettetal
Walter R. Miller
Richard Morrison, Jr.
H. C. Moss, Jr.
Harry Myron, Jr.
Peter A. Oliva
Orland S. Olsen, Jr.
C. O. Parker
Robert E. Piston
John P. Platt
Wallace L. Poole
Thomas P. Potter, Jr.
W. G. Preas
James J. Range
Gilbert A. Rannick
B. A. Richardson
Clarence L. Ruffin
J. M. Sams
George K. Scholl
A. D. Shelton
Howell W. Sherrod
M. Sidky-Afifi
Charles K. Slade
Mel D. Smith
Earl J. Sullivan
Hugh F. Swingle, Jr.
C. T. R. Underwood
C. J. Vandiver
Edward T. West, Jr.
Wm. A. Wiley, Jr.
John M. Wilson
Charles P. Wofford

Jonesboro

Sells Blevins
H. B. Cupp

Limestone

G. V. Stanton

Mountain Home

C. M. Creech
F. B. Kelly
Walter Fleishman
Martin Kerlan
W. A. Phillips
Harry N. Waggoner
Shelburne D. Wilson

WAYNE COUNTY

Waynesboro

James S. Lambert
Dexter L. Woods
Dexter L. Woods, Jr.

WEAKLEY COUNTY

Dresden

Ed. H. Welles, Jr.
Paul W. Wilson

Gleason

Robert M. Jeter

Greenfield

Edward T. Frank, Jr.
Ira F. Porter
Nathan F. Porter

Martin

Melvin K. Bottorff
R. W. Brandon, Jr.
Sam J. Denny
G. S. Plog
Enos C. Thurmond, Jr.

WHITE COUNTY

Sparta

W. H. Andrews
Robert F. Baker
Donald Bradley
Charles A. Mitchell
C. B. Roberts
Leighton H. Smith, Jr.

WILLIAMSON COUNTY

Franklin

W. F. Encke
Harry J. Guffee
Robert M. Hollister
Howell P. Hoover, Jr.
R. H. Hutcheson
Anthony Joel Lee
Walter W. Pyle
T. C. Rice
J. L. Willoughby

WILSON COUNTY

Lebanon

James C. Bradshaw
Joe F. Bryant
Morris D. Ferguson
A. T. Hall
R. C. Kash
James P. Leathers
Charles T. Lowe
S. B. McFarland
T. R. Puryear
J. H. Tilley
W. K. Tilley
R. Phillips Turner

VETERAN MEMBERS

M. L. Connell, Wartrace ..... Bedford
B. L. Burdette, Shelbyville ..... Bedford
T. R. Ray, Shelbyville ..... Bedford
J. S. Tipton, Friendsville ..... Blount
J. M. Ousley, Maryville ..... Blount
K. A. Bryant, Maryville ..... Blount
Roy A. Douglass, Sr., Huntingdon ..... Carroll
L. E. Trevathan, Bruceton ..... Carroll
Estill L. Caudill, Sr., Doctors Bldg., Elizabethton ..... Carter
Elisha Farrow, Bells ..... Crockett
S. E. McDonald, Bells ..... Crockett
W. B. Anderson, 2723 Wortham Drive, Nashville ..... Davidson
Anna M. Bowie, 1616 18th Ave., So., Nashville ..... Davidson
C. E. Brush, 2320 West End Ave, Nashville ..... Davidson
O. N. Bryan, 2122 West End Avenue, Nashville ..... Davidson
B. F. Byrd, Sr., 301 7th Ave., No., Nashville ..... Davidson
Will Camp, Rock Island ..... Davidson
Wm. R. Cate, 1100 Stonewall Dr. ..... Davidson
John S. Cayce, Mid-State Medical Center, Nashville ..... Davidson
W. J. Core, 1709 Stokes Lane, Nashville ..... Davidson
T. D. Dailey, Old Hickory ..... Davidson
W. C. Dixon, Doctors Building, Nashville ..... Davidson
Beverly Douglas, Med. Arts Bldg., Nashville ..... Davidson
Henry L. Douglass, Doctors Bldg., Nashville ..... Davidson
L. W. Edwards, 2001 Hayes St., Nashville ..... Davidson
Wm. H. Faulkner, 1601 Phillips St., Nashville ..... Davidson
R. W. Grizzard, 3630 West End Avenue, Nashville ..... Davidson
George A. Hatcher, College Grove ..... Davidson
O. S. Hauk, Tennessee State Prison, Nashville ..... Davidson
R. N. Herbert, 4124 Franklin Road, Nashville ..... Davidson
J. Harvill Hite, Bennie Dillon Bldg., Nashville ..... Davidson
Wm. A. Horan, 1104 Ordway Place, Nashville ..... Davidson
Hollis E. Johnson, 2122 West End Avenue ..... Davidson
W. P. Law, 618 Murfreesboro Road ..... Davidson
John M. Lee, Doctors Bldg., Nashville ..... Davidson
John J. Lentz, 3705 Central Ave, Nashville ..... Davidson
James D. Lester, Bennie Dillon Bldg., Nashville ..... Davidson
Milton Smith Lewis, Bennie Dillon Bldg., Nashville ..... Davidson
W. P. Manlove, 700 Broad St., Nashville ..... Davidson
C. C. McClure, Sr., 5650 Hillsboro Rd., Nashville ..... Davidson
Theodore Morford, 3510 Woodmont Blvd., Nashville ..... Davidson
D. L. Mumpower, 4114 Gallatin Road, Nashville ..... Davidson
Oscar G. Nelson, 1310 Church St., Nashville ..... Davidson
O. A. Oliver, D.D.S., 1915 Broad St., Nashville ..... Davidson
T. G. Pollard, Doctors Building Nashville ..... Davidson

Bruce P'Pool, Doctors Building, Nashville — Davidson
W. E. Reynolds, 1200 Plymouth Ave., Nashville — Davidson
B. L. Rucks, 6228 Cellini St., Coral Gables, Fla. — Davidson
H. S. Shoulders, 305 Bowling Ave., So., Nashville — Davidson
Robert E. Sullivan, 203 Evelyn Ave., Nashville — Davidson
S. R. Teachout, 303 Park Manor, 115 Woodmont Blvd — Davidson
Harold Truebger, 820 Normal Circle, Memphis — Davidson
Harlin Tucker, 303 Park Manor, 115 Woodmont Blvd., Nashville — Davidson
Paul L. Warner, 3001 Hobbs Road, Nashville — Davidson
Robert J. Warner, 204 Hillwood Dr., Nashville — Davidson
Jack Witherspoon, Doctors Bldg., Nashville — Davidson
John B. Youmans, Franklin, RFD 3, — Davidson
J. A. Ledbetter, Dyersburg — Dyer
L. D. McAuley, Oakland — Dyer
John W. Morris, Somerville — Fayette
Fred K. West, Rossville — Fayette
O. N. Torian, Sewanee — Franklin
M. D. Ingram, Trenton — Gibson
W. C. McRee, Trenton — Gibson
W. J. Johnson, Pulaski — Giles
Wm. A. Lewis, Pulaski — Giles
L. E. Coolidge, Greeneville — Greene
J. G. Hawkins, Greeneville — Greene
W. T. Mathes, Greeneville — Greene
L. P. Brooks, Chatta. Bk. Bldg., Chattanooga — Hamilton
John L. Cooley, Tarpon Springs, Florida — Hamilton
John E. Frazier, Lookout Mtn. — Hamilton
Paul M. Golley, 707 No. Bragg, Lookout Mtn., Chattanooga — Hamilton
Oscar D. Groshart, Provident Bldg., Chattanooga — Hamilton
E. L. Jenkins, 327 72nd Ave., St. Petersburg, Fla. — Hamilton
Stewart Lawwill, Sr., 1108 Med. Arts Bldg. — Hamilton
Wm. H. Marsh, 1702 Carroll Lane, Chattanooga — Hamilton
Harold J. McAlister, 1301 Dodds Ave., Chattanooga — Hamilton
Edward T. Newell, Sr. 707 Walnut St. — Hamilton
John B. Steele, 106 Morningside Drive, Chattanooga — Hamilton
G. Victor Williams 905 Tremont, Chattanooga — Hamilton
P. M. Bishop, Whiteville — Hardeman
J. Knox Tate, Bolivar — Hardeman
G. C. Lyons, Surgoinsville — Hawkins
O. M. Swanay, Rogersville — Hawkins
T. C. Chapman, Brownsville — Haywood
J. H. McSwain, Paris — Henry
E. B. Paschall, Paris — Henry
T. A. Caldwell, Jefferson City — Jefferson
Eben Alexander, Eastern State Hospital, Knoxville — Knox
M. C. Bowman, Woodson Drive, Knoxville — Knox
Wm. R. Cross — Knox
Ray V. DePue, Doctors Bldg., Knoxville — Knox
Louis A. Haun, Med. Arts Bldg., Knoxville — Knox
M. L. Jenkins, Corryton — Knox
R. L. McReynolds, Med. Arts Bldg., Knoxville — Knox
Alfred F. Miller, 820 Temple, Knoxville — Knox
S. Joe Platt, Blount Prof. Bldg., Knoxville — Knox
W. D. Richards, Hamilton Bank Bldg., Knoxville — Knox
M. S. Roberts, Medical Arts Bldg., Knoxville — Knox
W. S. Alexander, Ridgely — Lake
James L. Dunavant, Ripley — Lauderdale
J. R. Lewis, Ripley — Lauderdale
J. W. Danley, Lawrenceburg — Lawrence
W. E. Boyce, Hohenwald — Lewis
A. L. Griffith, Elora — Lincoln
T. E. Ashley, Fayetteville — Lincoln
J. E. Sloan, Fayetteville — Lincoln
Tate Collins, Jackson — Madison
W. T. Fitts, 700 West Forest St., Jackson — Madison
John C. Pearce, 420 East Main, Jackson — Madison
John E. Powers, East Chester St., Jackson — Madison
Claude Y. Clarke, Mt. Pleasant — Maury
G. C. English, Mt. Pleasant — Maury
James H. Jones, Mt. Pleasant — Maury
B. H. Woodard, Spring Hill — Maury
J. A. Jones, Selmer — McNairy
Wm. J. Cameron, Box 46 — Monroe
W. A. Rogers, Tellico Plains — Monroe
J. H. Carr, Oakdale — Morgan
B. F. Runyon, 408 Franklin St., Clarksville — Montgomery
Lex Dyer, Cookeville — Putnam
L. M. Freeman, Granville — Putnam
W. A. Howard, Cookeville — Putnam
J. T. Moore, Sr., Algood — Putnam
J. S. Hawkins, Springfield — Robertson
Marshall Brucer, Rt. 4, Box 203, Tucson, Arizona — Roane
James Carr, Oakdale — Roane
Hyman Rossman, Oak Ridge — Roane
George P. Zirkle, Kingston — Roane
J. B. Black, Murfreesboro, 618 E. Main St. — Rutherford
Joseph E. J. King, Murfreesboro, Box 899 — Rutherford
D. T. Chambers, Norma — Scott
M. E. Thompson, Oneida — Scott
Riley L. Ingle, Sevierville — Sevier
C. A. Chaffee, Cordova — Shelby
C. D. Allen, 1019 Madison Ave., Memphis — Shelby
S. B. Anderson, 956 Hiawatha, Memphis — Shelby
J. L. Beauchamp, 538 Stonewall, Memphis — Shelby
Chas. A. Bender, 4088 Walnut Grove Rd., Memphis — Shelby
R. L. Bowlin, Exchange Bldg., Memphis — Shelby
L. F. Boyd, 2067 Hallwood Drive, Memphis — Shelby
Kimsey M. Buck, 1192 Madison Ave., Memphis — Shelby
James F. Bradley, Route 1, Millington — Shelby
J. P. Carter, 649 White Station Road, Memphis — Shelby
W. C. Colbert, 899 Madison Ave., Memphis — Shelby
L. N. Coppedge, 1807 Harbert, Memphis — Shelby
R. R. Davenport, 664 No. McLean, Memphis — Shelby
H. B. Everett, 2541 Broad Street, Memphis — Shelby
R. B. Flaniken, 1115 Madison Ave., Memphis — Shelby
C. H. Glover, Exchange Bldg., Memphis — Shelby
W. H. Gragg, Sr., 1597 Jackson Avenue, Memphis — Shelby
W. R. Graves, 505 So. Highland, Memphis — Shelby
Emmett R. Hall Exchange Bldg., Memphis — Shelby
B. F. Hardin, Hickman Bldg., Memphis — Shelby
A. G. Hudson, 3474 Southern Avenue, Memphis — Shelby
H. B. Jacobson, 114 No. McLean Ave., Apt. 2, Memphis — Shelby
D. H. James, 1125 Exchange Bldg., Memphis — Shelby
J. A. James, 1125 Exchange Bldg., Memphis — Shelby
O. M. Laten, 1618 Exchange Bldg., Memphis — Shelby
Thomas F. Leatherwood, 835 Exchange Bldg., Memphis — Shelby
W. H. Lovejoy, 511 So. Parkway, East, Memphis — Shelby
C. R. Mason, 14 West Mallory Ave., Memphis — Shelby
J. W. Mason, 606 Chelsea Ave., Memphis — Shelby
R. F. Mason, 188 So. Bellevue, Memphis — Shelby
J. E. Meadors, 3383 Summer Ave., Memphis — Shelby
A. H. Meyer, Sr., Sterick Bldg., Memphis — Shelby
James E. Morris, Jr., 1183 Whiting, Memphis — Shelby
J. A. McIntosh, Col. Mut. Tower, Memphis — Shelby
L. C. McVay, Marion, Arkansas — Shelby
J. L. Morgan, 328 Angelus, Memphis — Shelby
Arthur G. Quinn, Hot Springs, Ark — Shelby
L. P. Pearce, Collierville — Shelby
J. W. Ragsdale, 1001 Madison, Memphis — Shelby
Alma B. Richards, 1214 Central Ave., Memphis — Shelby
W. L. Rucks, 3314 Poplar Ave., Memphis — Shelby
L. V. Schmittou, c/o General Delivery, Clarksville, Texas — Shelby
M. B. Seligstein, U & P Bank Bldg, Memphis — Shelby
Neuton S. Stern, 899 Madison Ave., Memphis — Shelby
Carrol C. Turner, 5650 Raleigh-LaGrange Rd., Memphis — Shelby
Cecil Warde, 1707 Madison Ave., Memphis — Shelby
S. B. Williamson, Milan, Tenn. — Shelby
W. L. Williamson, 40 South Evergreen, Memphis — Shelby
Percy H. Wood, 411 North Highland, Memphis — Shelby
R. E. Key, Carthage — Smith
H. W. Bachman, Sr., Doctors Bldg., Bristol — Sullivan-Johnson
R. N. Buchanan, Sr., Hendersonville — Sumner
Nat H. Copenhaver, Central Bldg., Bristol — Sullivan-Johnson
A. B. English, 26 4th St., Bristol — Sullivan-Johnson
B. Roy Howard, Kingsport — Sullivan-Johnson
S. R. McDowell, Blountville — Sullivan-Johnson
Alan K. Turner, 200 Solar St., Bristol, Va. — Sullivan-Johnson
Wm. K. Vance, Bristol — Sullivan-Johnson
Aaron Cole, Piney Flats — Washington, Carter, Unicoi
U. G. Jones, Johnson City City — Washington, Carter, Unicoi
A. J. Willis, Jonesboro — Washington, Carter, Unicoi
R. W. Brandon, Sr., Martin — Weakley
H. G. Edmondson, Martin — Weakley
J. O. Walker, Franklin — Williamson
O. Reed Hill, 1030 West Main St., Lebanon — Wilson

DECEASED MEMBERS 1964

G. M. Richmond, Jellico — Campbell
Charles Rogers, Caryville — Campbell
J. F. Adams, Woodbury — Cannon
E. E. Edwards, McKenzie — Carroll
W. E. McGaha, Newport — Cocke
G. E. Aycock, Nashville — Davidson
W. F. Fessey, Nashville — Davidson
Eugene P. Johnson, Old Hickory — Davidson
Ralph M. Larsen, Nashville — Davidson
R. B. T. Sweany, Manchester — Davidson
James J. Vaughn, DDS, Nashville — Davidson
Louis D. Zeidberg, Nashville — Davidson
J. T. Fuller, Mayfield, Ky. — Dyer
P. J. Flippin, Decherd — Franklin
John Jackson, Dyer — Gibson
John W. Oursler, Humboldt — Gibson
Frank Harris, Chattanooga — Hamilton
E. E. Reisman, Chattanooga — Hamilton
Leon Pope, Grand Junction — Hardeman
James W. Carroll, Savannah — Hardin
J. G. Anderson, Jackson — Madison
Frank N. Moore, Jackson — Madison
Kelly Smythe, Bemis — Madison
Samuel H. Freas, South Pittsburg — Marion
W. J. Abel, Decatur — McMinn
D. F. Seay, Englewood — McMinn
E. A. Guynes, Knoxville — Knox
A. R. McCullough, Knoxville — Knox
Robert F. Patterson, Knoxville — Knox
W. A. Shelton, Knoxville — Knox
W. Rufus Smith, Knoxville — Knox
A. B. Qualls, Livingston — Overton
Albert C. Broyles, Dayton — Rhea
Paul R. Marsh, Oak Ridge — Roane
John S. Freeman, Springfield — Robertson
A. J. Edwards, Bristol, Virginia — Sullivan
J. Atlee Flora, Kingsport — Sullivan
Arthur Hooks, Kingsport — Sullivan
R. A. Steadman, Kingsport — Sullivan
W. A. Tyler, Kingsport — Sullivan
Kermit Jones, Westmoreland — Sumner
A. J. Bulter, Covington — Tipson
E. Lynn Anderson, Memphis — Shelby
J. L. Beauchamp, Memphis — Shelby
Wm. Britt Burn, Abilene, Texas — Shelby
J. A. Gardner, Jr., Mempbis — Shelby
L. M. Graves, Memphis — Shelby
Carruthers Love, Memphis — Shelby
J. A. McQuiston, Memphis — Shelby
Mary Frances Poe, Memphis — Shelby
Henry C. Roberts, Memphis — Shelby
R. L. Sanders, Memphis — Shelby
H. C. Schmeisser, Memphis — Shelby

W. O. Speight, Sr., Memphis ..... Shelby
William W. Tribby, Memphis ..... Shelby
W. J. Wadlington, Memphis ..... Shelby
J. L. Hankins, Johnson City ..... Washington
George J. Sells, Johnson City ..... Washington
Charles Ray Womack, Memphis ..... Wilson
G. M. Allison Tadonia, Texas ..... Wilson

MEMBERS RESIDING OUTSIDE OF TENNESSEE

Atria, Nicholas F., South Carolina State Hospital, P. O. Box 189, Columbia, S. C.
Brinkley, Billy B., 633 State Street, Bristol, Virginia
Cabrera, Juan R., Veternas Administration Hospital, 2002 Holcombe, Ave., Houston, Texas.
Crawley, William D., Jr., 783 Chicamauga Avenue, Rossville, Georgia
Crouch, Henry W., Apt. 7, 37 Blackburn, Belleville, Illinois
Crook, Charles S., 3542 S. W., 5th Street, Miami, Florida
Denniston, Joseph C., Dept. of Welfare, Health & Welfare Building, Harrisburg, Pennsylvania
Graeme, Jock L., 556 Morris Avenue, Summitt, N. J.
Green, Paul A., Clinic, Plaza, Suite 13, 401 Lowell Drive, Huntsville, Alabama
Grymes, W. Lloyd, Mount Airy, North Carolina
Hampton, Hobart M., Weber City, Virginia
Hatfield, William H., The Memorial Hospital, Easton, Maryland
Haws, Frank P., 905 Madison Street, Huntsville, Alabama
Kundell, Donald W., St. Luke's Hospital, Duluth, Minnesota
Kuester, Evert E., Adventist Medical Center, 165 Uenoya, Aza, Okinawa
Klingman, Walter O., 3372 University Station, Charlottesville, Virginia
Ludington, D. Clifford, Jr., Adventist Hospital, Box 240, Benzhazi, Libya, Africa
Meneely, George, M. D. Anderson Hospital, University of Texas, Houston, Texas
Pitman, Naomi K., White Memorial Hospital, 1720 Brooklyn, Los Angeles, California
Ranck, Edward B., 1622 Lafayette Avenue, Biloxi, Mississippi
Roherts, A. D., 1210 Windsor Road, Apt. 214, Austin, Texas
Sexton, Curtis C., 392 AMG. Vandenberg Air Force Base, California
Shelamer, Arthur M., USAID, c/o State Department Mail Room, Washington, D. C.
Shull, V. F., Summerville, Georgia
Solomon, John H., Bells Mills Road, Bethesda, Maryland
Steadman, Hunter M., 1223 Thomas, Denton, Texas
Winebrenner, John D., 2312 Clarkwood Drive, Louisville, Kentucky
Wright, James C., 201 Richmond Avenue, Rossville, Georgia
Wright, Warren K., Plain Dealing, Louisiana

ACCEPTED AMERICAN MEDICAL ASSN

HOMOGENIZED
VITAMIN D MILK
PRODUCES SOFT CURD
(400 U.S.P. Units Vitamin D
Per Quart)

"A" Grade Sealtest MILK Phone AL 5-6451

Fortified Fat Free Milk
(2000 Units Vitamin A—400 Units Vitamin D)
NASHVILLE PURE MILK CO.

PSYCHIATRIST

for mental health center in Oak Ridge. Outstanding schools and cultural advantages in this famed-scientific community. Starting salary $17,000-$18,000. (Write Dr. Earl Eversole, Medical Arts Building, Oak Ridge, Tennessee.)

INDEX TO VOLUME 57

PAGES BY ISSUE

January	1-40	May	171-224	September	357-392
February	41-90	June	225-280	October	393-428
March	91-130	July	281-322	November	429-462
April	131-170	August	323-356	December	463-498

INDEX OF AUTHORS

Appel, Kenneth E. 192
Arnold, I. Lee 367
Baker, Joseph J. 197
Beaton, Lindsay 187, 199
Binder, Samuel S. 58
Bowman, J. R. 442
Bryant, Joe F. 409, 473
Bryant, William F., Jr. 41
Callison, M. D. 281
Cannon, Bland W. 225
Clement, Frank G. 195
Dale, W. Andrew 402
Davachi, Asghar 330
DeSaussure, Richard L. 91
Dillon, Ann 41
Dodds, Joseph J. 53, 435
Donovan, Louis P. 141
Edwards, William H. 108
Ettman, Irving K. 438
Fesmire, Francis M. 451
Foster, John H. 393
French, W. Edward 296
Garber, Robert S. 171
Gilbertson, Robert B. 9, 147
Glasscock, M. E., III 323
Greenfield, Jack 45
Grime, Harvey 293
Harris, Thomas R. 327
Heffernon, Elmer W. 407
Herrington, J. Lynwood, Jr. 463
Hutcheson, R. H. 41
Jackson, Lawrence M. 136
Killen, Duncan A. 136
Kintner, Elgin P. 5
Klatte, Eugene C. 472
Lambeth, Samuel S. 5
Maguda, Thomas A. 375
Marsh, Clarence B. C. 407
Mitchell, Edwin 330
Myers, Roland H. 91
McCall, Charles B. 327
McCormick, William F. 429
McCutchen, John J. 429
Obenour, Richard A. 371
O'Neill, James A., Jr. 131
Parrish, Henry M. 141
Pasternack, Morris 13
Phillips, Jerry C. 438
Reavis, Charles W. 293
Richie, Robert E. 131
Riddler, John 299
Roberts, F. L. 281
Ryan, Philip E. 177
Satterfield, William T. 77
Schmidt, William F. 468
Scott, H. William, Jr. 131, 393
Sell, Sarah W. 362
Sexton, Richard C., Jr. 357
Sheeley, William F. 182
Shull, Harrison J. 131
Simmons, James C. 91
Snyder, Harold E. 131
Spray, Paul 373
Thomas, John 330
von Werssowetz, Odon F. 289
Wachtel, Andrew S. 1
Watson, Davis R. 375
Young, J. M. 451

INDEX OF SUBJECTS

Abbreviations: "ab" for abstract; "ed" for editorial; "pp" for president's page; "cc" for clinical staff conference; "cpc" for clinicopathologic conference; and (*) for original articles.

AGED
  disease and disability among (ed) 75
  medical needs of (ed) 123
AMERICAN MEDICAL ASSOCIATION
  continuing education (pp) 345
  Dr. Annis (pp) 384
  Gunderson committee (pp) 162
  medical education loan program, AMA-ERF (ed) 163
  remarks of farewell, (Annis) (ed) 385
  San Francisco election story 348
  Norman A. Welch (ed) 419
AMYLOIDOSIS, primary (cpc) 475
ANNOUNCEMENTS 37, 84, 130, 170, 221, 277, 320, 355, 390, 426, 461, 487
APPENDIX, appendectomy, suppurative complications of (*) 136
ASPERGILLOSIS, bronchopulmonary (ab) 140
BILIARY FISTULA: See Trauma
BLOODVESSELS
  abdominal aorta, coarctation of (cc) 334
  angiography, peripheral, in a large city hospital (ab) 336
  atherosclerotic lesions, evaluation and surgical management of (*) 108
  occlusive arterial lesions of wrist and hand (*) 402
  pulseless disease (*) 327
  renovascular hypertension (*) 393
BOOK REVIEWS 85, 269, 389, 441, 443
CANCER
  bile duct (cpc) 337
  bronchogenic metastatic (cpc) 67
  following "healed gastric ulcer" (*) 407
  head and neck, technic and treatment of, by temporary artery infusion (*) 375
  liver, primary of (cpc) 20
  pre-invasive of cervix, conservative management, relationship to pregnancy (*) 5
  pseudomyxoma peritonei (cc) 16
CAROTID, cavernous fistula (*) 91
CEREBRAL VASCULAR ACCIDENTS, neoplasms masquerading as (*) 429
CERVIX: See Myoma
CHALLENGES (pp) 121
CHOLANGIOGRAPHY, percutaneous transhepatic (cc) 378
CHOLESTEROL, endogenous synthesis of, in experimental nephrosis (ab) 146
CLINICOPATHOLOGIC CONFERENCES 20, 67, 116, 152, 207, 262, 308, 337, 411, 475
COLITIS, ulcerative, total coloproctectomy and ileostomy for (*) 45
COLON, ruptured diverticulum of (cpc) 308
CONTRACEPTIVE, oral (ed) 122
CRYPTOCOCCOSIS, and sarcoidosis (cc) 444
DEATHS 32, 79, 125, 164, 272, 350, 385, 422, 457, 482
DERMATOMYOSITIS, familial occurrence of (ab) 57
DIABETES MELLITUS
  diabetic keto-acidosis, many faces of (*) 357
  Tennessee camp for children (ed) 214
DIAPHRAGM
  eventration of, partial volvulus of stomach (*) 463
  prolonged paralysis following pulmonary embolism (*) 13
DIARRHEA of travelers to Mexico, 5-yr. study (ab) 12
DISABILITY (ed) 481
DUODENAL ULCER: See Small Intestine
DYSPNEA, clinical evaluation of (*) 371
EDITORIALS 29, 75, 122, 163, 214, 271, 315, 347, 385, 419, 456, 481
EMBOLISM
  pulmonary, prolonged paralysis of diaphragm (*) 13
  pulmonary, unusual clinical features (ab) 228
EPIDERMOID CYST, suprasellar (cpc) 411
EYE, A-V syndrome (*) 367
FAINTERS, EPILEPTICS, detection of (ab) 307
GALLBLADDER, cholecystojejunostomy (*) 296
GYNECOLOGY, transverse incision in (cc) 202
HEART
  acute myocardial infarction, shock in (ab) 370

aortic insufficiency, hemodynamic study of (ab) 201
aortic stenosis, supravalvular, underdevelopment and characteristic facies (ab) 437
coronary arterial disease, acute effects of smoking on myocardial performance in (ab) 344
coronary disease among Navajo Indians (ab) 52
hyperlucent lung associated with myocardial disease (*) 330
implantable pacemaker for correction myxoma of left atrium (ab) 467
radiographic technic, diagnosis cardiovascular disease (6) 472
of complete heart block (ab) 151
ventricular tachycardia (cc) 301
HEMOCHROMATOSIS, idiopathic, treated by multiple phlebotomies (*) 9
HERNIA, femoral (*) 473
HISTOPLASMA, meningitis (ab) 315
HOUSING for the aged in Denmark (ed) 30
HODGKIN'S DISEASE: See Sarcoma
HYPEROSTOSIS: See Skull
HYPERTENSION, renovascular, methods of diagnosis and treatment (*) 393
IDENTIFICATION (president's address) (*) 225
IMMUNIZATION, children, recent advances (*) 362
LIVER, primary carcinoma of (cpc) 20
LUNG, tuberous sclerosis (*) 468
MEDICAL CARE
emergency medical identification symbol (ed) 419
free world medicine (pp) 314
housing for aged in Denmark (ed) 30
medicare (pp) 418
needs of our aged (ed) 123
war on poverty (pp) 270
working relationships, physicians and clergymen 420
MEDICAL ETHICS
doctor's role in adoption (ed) 271
doctors in drug business (ed) 215
MEDICAL NEWS IN TENNESSEE 34, 82, 127, 166, 218, 275, 318, 352, 387, 424, 459, 484
MEDICAL STUDENTS, selection of (*) 281
MENINGIOMA: See Tumor
MENTAL HEALTH
action for, joint commission report (*) 192
closing summary (*) 199
community clinic, role, in care of psychotic patient (*) 1
community, information and education in (*) 182
community services, working together for (*) 171
cooperative action for (*) 177
medicine's dilemma and manifest destiny (*) 187
remarks at congress on (*) 195
Tennessee congress on 171
Tennessee congress on (pp) 213
what's happening in Tennessee (*) 197
MYOMA, submucous, in cervical stump (*) 58
NARCOTICS, are postoperative necessary (ab) 66
NATIONAL NEWS 33, 80, 126, 164, 216, 273, 317, 351, 386, 423, 457, 483
NEURINOMA: See Tumor
NEUROPATHY, sensory radicular (cpc) 152
ORTHOPEDICS, overseas, current program of (*) 373
PANCREATITIS, acute, differential diagnosis of (*) 53
PARANASAL SINUS, surgical treatment of acute frontal sinusitis (*) 323
PEPTIC ULCER, surgical management, complications, mortality (*) 299
PERSONAL NEWS 36, 84, 129, 169, 220, 277, 319, 353, 389, 426, 461, 485
PHYSICAL MEDICINE, scope and application (*) 289
PLACEMENT SERVICE 89, 94, 279, 321, 356
PREGNANCY, relationship of pre-invasive cancer, conservative management of (*) 5
PRESIDENT'S PAGE 28, 74, 121, 162, 213, 270, 314, 345, 384, 418, 455, 480
PROGRAMS AND NEWS OF MEDICAL SOCIETIES 32, 79, 125, 164, 216, 272, 316, 349, 385, 422, 457, 482
PSEUDOMYXOMA PERITONEI: See Cancer
PSYCHIATRY: See Mental Health
PULSELESS DISEASE: See Bloodvessels
RECTUM, submucosal nodules of (*) 435
RETIREMENT PLANS, for physicians, present status of (*) 77
RHEUMATIC FEVER, urinary 5-methoxytryptamine in (ab) 15
SARCOIDOSIS and cryptococcosis (cc) 444
SARCOMA, Hodgkin's (cpc) 207
SKULL, infantile cortical hyperostosis (*) 293
SMALL INTESTINE
duodenal ulcer, clinical appraisal of gastric freezing (*) 131
obstruction due to carcinoid tumor (cpc) 116
SMOKING BEHAVIOR, recreational activities and attitudes toward smoking in school children (ab) 12
SNAKEBITE, venomous, in Tennessee (*) 141
SPINE
agenesis of the odontoid with chronic subluxation of atlanto-axial articulation (*) 438
spondylosis, cervical (cc) 61
STAFF CONFERENCE 16, 61, 202, 301, 334, 378, 444
STOMACH, partial volvulus of (*) 463
SYNDROME, Hicks, Denny-Brown (cpc) 152
TENNESSEE MEDICAL ASSOCIATION
advertising and exhibiting by pharmaceutical companies (pp) 74
board of trustees, minutes of meeting 260
committees 90, 223
committees, importance of (pp) 480
council meetings, minutes of 259
David L. McQuiddy, Sr. (ed.) 347
house of delegates, proceedings of 229
Kampmeier, R. H., president 160
membership roster 489
officers (state and county) 40, 223, 280, 322, 392
past year and rededication of effort for coming year (pp) 28
president's address 225
scientific program 97
talent recognized in AMA (ed) 347
TESTICLE, anchoring in orchiopexy, simple and effective method (*) 442
THALIDOMIDE, Canadian experience (ab) 19
THYROID
achilles reflex in disorders of (ed) 456
treatment of hyperthyroidism (*) 147
TOXOPLASMA antibodies among college students (ab) 73
TRAUMA
biliary fistula secondary to bullet wound (*) 409
pelvic, genitourinary complications of (ab) 60
TUBERCULOSIS, epidemiologic investigation in a Tennessee high school following discovery of student case (*) 41
TUBEROUS SCLEROSIS: See Lung
TUMOR
carcinoid, obstruction of small intestine due to (cpc) 116
meningioma with extracranial metastases (cpc) 451
myxoma of left atrium (ab) 467
neoplasms masquerading as cerebral vascular accidents (*) 429
neurinoma, acoustic (cpc) 262
UNCONSCIOUS PATIENT, care of (ed) 29
URINARY TRACT, infection, postcatheterization (ed) 315
UTERUS, puerperal, perforation of (cc) 382



The Doctor's Visit, Jan Steen 1626-1679, Mauritshuis, The Hague

In Diverticulosis and Diverticulitis...

METAMUCIL® brand of psyllium hydrophilic mucilloid

"Diverticulosis ... a low-roughage diet is advisable.... Constipation is avoided, preferably by the daily use of Metamucil.

"Diverticulitis Mild, chronic symptoms of diverticulitis, such as diarrhea or flatulence also are treated[1] by low-roughage diet, adequate fluid intake and Metamucil...."

Usual Adult Dosage: One rounded teaspoonful of Metamucil (or one packet of Instant Mix Metamucil) in a glass of cool liquid one to three times daily.

Metamucil is available as Metamucil powder in containers of 4, 8 and 16 ounces and as flavored Instant Mix Metamucil in cartons containing 16 and 30 single-dose packets.

1. Welch, C. E., Diverticula of the Alimentary Tract, in Conn, H. (editor): Current Therapy—1961, Philadelphia, W. B. Saunders Company, 1961, pp. 224-225.

SEARLE

Research in the Service of Medicine



YOU:

HISTORY: 20 years of study, plus internship/residency. Substantial investment in professional location, equipment. **SIGNS and SYMPTOMS:** Reports that large home, growing family and minimal professional standard of living are a concern. Still ahead—college costs, retirement, natural estate ambitions. **PROGNOSIS:** Needs 15-20 peak years of income to pay off education, home; rear family; retire. All this while battling tough taxes, and without the benefit of social security or company paid life and disability insurance, pension plan. **TREATMENT:** Learn about Mutual Benefit Life's "Seven Significant Benefits". Talk with a M.B.L. representative. See how a built-for-you plan solves specific problems through unique disability clauses, unusually high cash and loan values, liberal survivor income options—and more. Write on your own professional letterhead for exclusive report covering a full range of typical insurance requirements for physicians. Just ask for a copy of *Consultant's Report.*

Those who plan ahead get ahead **MUTUAL BENEFIT LIFE** INSURANCE COMPANY, NEWARK, NEW JERSEY

CARRIER OF YOUR TENNESSEE MEDICAL ASSOCIATION GROUP LIFE INSURANCE PLAN

EDWARD C. DUNN	SETH W. SIZER	THERON M. LEMLY
1104 Sudekum Bldg.	1211 James Bldg.	1309 Poplar Ave.
Nashville, Tenn.	Chattanooga, Tenn.	Memphis, Tenn.



following infection

STRESSCAPS B and C vitamins in therapeutic amounts...help the body mobilize defenses during convalescence...aid response to primary therapy. The patient with a severe infection, and many others undergoing physiologic stress, may benefit from STRESSCAPS.

STRESSCAPS®

Stress Formula Vitamins Lederle

FOR PROFESSIONAL RECOMMENDATION ONLY

Each capsule contains:	
Vitamin B_1 (as Thiamine Mononitrate)	10 mg.
Vitamin B_2 (Riboflavin)	10 mg.
Niacinamide	100 mg.
Vitamin C (Ascorbic Acid)	300 mg.
Vitamin B_6 (Pyridoxine HCl)	2 mg.
Vitamin B_{12} Crystalline	4 mcgm.
Calcium Pantothenate	20 mg.

Recommended intake: Adults, 1 capsule daily, for the treatment of vitamin deficiencies. Supplied in decorative "reminder" jars of 30 (one month's supply) and 100 (three months' supply).

LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY Pearl River, N.Y. Lederle

8693 4

SAINT ALBANS

PSYCHIATRIC HOSPITAL

(A Non-Profit Organization)

Radford, Virginia

Telephone: 639-2482

STAFF

James P. King, M.D., Director

William D. Keck, M.D.
Clinical Director
James K. Morrow, M.D.
Silas R. Beatty, M.D.

Edward W. Gamble, III, M.D.
Morgan E. Scott, M.D.
J. William Giesen, M.D.
Internist (Consultant)

Clinical Psychology:
Thomas C. Camp, Ph.D.
Artie L. Sturgeon, Ph.D.

Don Phillips
Administrator

AFFILIATED CLINICS

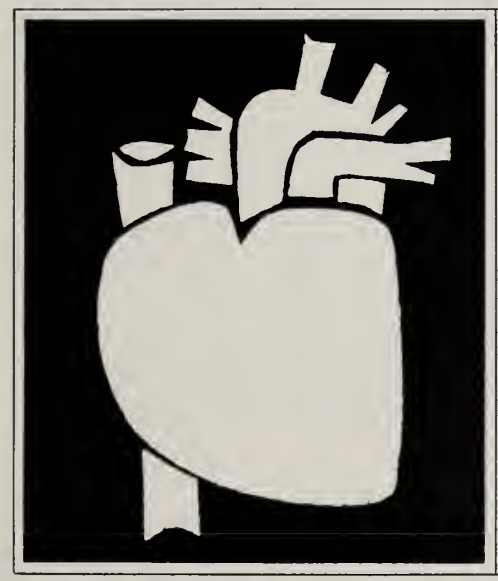
Bluefield Mental Health Center
525 Bland St., Bluefield, W. Va.
David M. Wayne, M.D.
Phone: 325-9159

Beckley Mental Health Center
109 E. Main Street, Beckley, W. Va.
W. E. Wilkinson, M.D.
Phone: 253-8397

Charleston Mental Health Center
1206 Quarrier Street, Charleston, W. Va.
Malcolm G. MacAulay, M.D.
Phone: 344-3578

Mental Health Clinic
Professional Building, Wise, Va.
Pierce D. Nelson, M.D.
Phone: 328-2211

A CONSERVATIVE Rx FOR A CLASSIC Dx



SUDDEN ONSET
ANTERIOR
VAGUE IN CHARACTER
EFFORT
SUBSTERNAL

MILTRATE®

meprobamate 200 mg. + pentaerythritol tetranitrate 10 mg.

Effective tranquilization
plus
long-acting coronary vasodilation
for
prophylaxis of pain in angina pectoris

Indications: 'Miltrate' is useful for prophylaxis of pain in angina pectoris and coronary insufficiency, especially where anxiety is a factor. **Contraindications:** Like all nitrates, pentaerythritol tetranitrate should be avoided or prescribed cautiously for patients with glaucoma. Previous allergic or idiosyncratic reactions to meprobamate contraindicate subsequent use. **Precautions:** *Meprobamate* — Patients engaged in activities requiring alertness should be warned of drowsiness. Meprobamate may increase the effects of excessive alcohol, and the possibility of dependence should be considered, particularly in patients with a history of drug or alcohol addiction. Sudden withdrawal may result in reactions, rarely epileptiform seizures. Grand mal attacks may be precipitated in persons susceptible to both grand and petit mal. Prescribe cautiously and in small quantities to patients with suicidal tendencies. **Side effects:** *Pentaerythritol tetranitrate* — The most common side effects are transient headache, nausea, and rash. Weakness, palpitation, flushing, gastrointestinal distress, and lightheadedness have been reported on a few occasions. *Meprobamate* — May cause drowsiness and, rarely, ataxia, usually controlled by decreasing the dosage. Allergic or idiosyncratic reactions are rare, generally developing after one to four doses of the drug. Mild reactions include urticarial or maculopapular rash. Serious reactions, rarely encountered, include dermatological effects, acute nonthrombocytopenic purpura, chills, fever, fainting spells, angioneurotic edema, bronchial spasm, hypotensive crisis, anuria, anaphylaxis, stomatitis and proctitis. Treatment should be symptomatic, and the drug not be reinstituted. **Dosage:** Usual dosage is one or two tablets before meals and at bedtime. Individualization of dosage is required for maximum therapeutic effect. Doses above twelve tablets daily are not recommended. **Supplied:** White tablets, each containing meprobamate 200 mg. and pentaerythritol tetranitrate 10 mg. *Before prescribing, consult package circular.*

WALLACE LABORATORIES / Cranbury, N. J.

CML-4087

Tennessee Medical Association's

Exclusively Approved

GROUP DISABILITY INCOME PROGRAM

Administered By

Smith, Reed, Thompson & Ellis Co.

1322 Nashville Trust Building
NASHVILLE 3, TENNESSEE
Phone 255-7625

WILLIAM H. ELLIS, C. L. U. MGR.
THOMAS G. HENRY

ASSOCIATES

Alden H. Smith, C. L. U.

Arthur D. Reed, C. L. U.

Joe Thompson, Jr., C. L. U.

Alden H. Smith, Jr., C. L. U.

E. Dan Smith, II

Underwritten By

Commercial Insurance Company

Newark, New Jersey



Outwardly calm...but what goes on inside?

Appearances on the outside do not necessarily suggest what goes on inside. This is particularly true of the ulcer patient, who may appear jolly and unruffled to his neighbors, but presents to you the classic symptoms: organic and functional disorders of the G.I. tract, associated with anxiety and tension.

Consider, when you see him next, the value of PATHILON® SEQUELS® with Phenobarbital, which provides sustained anticholinergic protection from spasm and pain in the target areas, as well as sustained phenobarbital action against triggering anxiety. The controlled release of the active ingredients in the SEQUELS® formulation means protective medication day and night.

Effective in peptic ulcer, intestinal colic, ileitis, esophageal spasm, spastic colon, alcohol-induced G.I. upsets, gastric hypermotility and anxiety neurosis with G.I. symptoms. Should be used as adjunct to other measures.

Side Effects (due to tridihexethyl chloride): dry mouth, blurring of vision, constipation.

Contraindications: urinary bladder neck obstruction; glaucoma; obstructive congenital anomalies of the gastrointestinal tract; pyloric obstruction; congenital megacolon; and stenosing gastric or duodenal ulcer with significant gastric retention.

Also available, without phenobarbital, as PATHILON® Tridihexethyl chloride SEQUELS® 75 mg.

Pathilon® Sequels® with Phenobarbital Sustained Release Capsules

Each capsule contains: Tridihexethyl chloride, 75 mg., and phenobarbital, 45 mg.

LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, New York

Lederle

313-4

REFER EYE PATIENTS
TO AN
EYE PHYSICIAN

By so doing, you will be assured of a complete diagnosis of your patients' eyes.

Guild Opticians complete the cycle for Professional Service.

GUILD OF PRESCRIPTION OPTICIANS OF AMERICA

BE SAFE—BE SURE

SEE

YOUR GUILD OPTICIAN

FOR

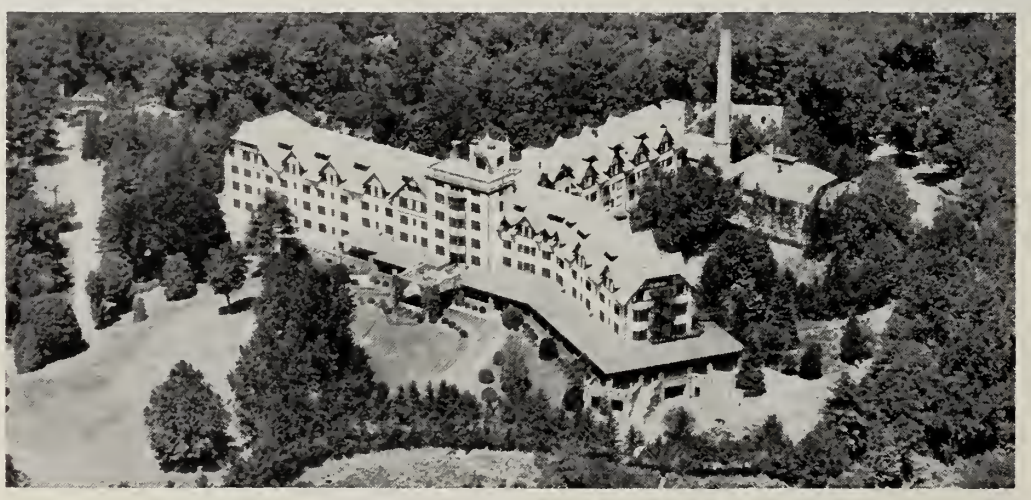
THE BEST SERVICE

EYE PHYSICIANS: Please Note—

Your prescriptions for glasses are "SAFE" when referred to a Guild Optician. Bound by the code of Ethics to uphold the highest standards in optical service.

APPALACHIAN HALL
Established 1916

Asheville North Carolina



An Institution for the diagnosis and treatment of Psychiatric and Neurological illnesses, rest, convalescence, drug and alcohol habituation.
Insulin Coma, Electroshock and Psychotherapy are employed. The Institution is equipped with complete laboratory facilities including electroencephalography and X-ray.
Appalachian Hall is located in Asheville, North Carolina, a resort town, which justly claims an all around climate for health and comfort. There are ample facilities for classification of patients, rooms single or en suite.

WM. RAY GRIFFIN, JR., M.D.
ROBERT A. GRIFFIN, M.D.
MARK A. GRIFFIN, SR., M.D.
MARK A. GRIFFIN, JR., M.D.

For rates and further information write
Appalachian Hall, Asheville, N. C.

Professional Liability Insurance
(MALPRACTICE)

Policy and Rates Approved
by the
TENNESSEE MEDICAL ASSOCIATION

Standard Coverage That SAVES YOU 35%



Class 1—Physicians doing no surgery

Class 2—Physicians doing minor surgery or assisting in major surgery on own patients

Class 3—Surgeons - General Practitioners who perform major surgery or assist in major surgery on other than their own patients and specialists: Anesthesiologists, Cardiologists (including catheterizations, but not including surgery), Ophthalmologists and Proctologists

Class 4—Surgeons - Specialists

Limits	Class 1	Class 2	Class 3	Class 4
5/15	$ 37.05	$ 46.15	$ 89.05	$133.25
10/30	50.02	62.30	120.22	179.89
25/75	63.36	78.92	152.28	227.86
50/150	70.02	87.22	168.30	251.84
75/225	74.10	92.30	178.10	266.50
100/300	76.32	95.07	183.44	274.50
200/300	79.66	99.22	191.46	286.49
300/300	81.88	101.99	196.80	294.48
200/500	88.77	108.61	202.13	298.49
500/500	93.59	114.61	213.71	315.81
500/1 million	114.70	135.99	236.37	339.81
1 million/1 million	120.25	142.91	249.73	359.79

1. Partnership liability, increase premium for each partner by 20%.
2. X-Ray Therapy and Shock Therapy quotations made on request.
3. Premises Liability (bodily injury, property damage and medical payments) Minimum premium $8.00.

FARRINGER & CO.
Phone 524-7335
Knoxville, Tennessee

FARRINGER & CO.
Phone 276-7331
Memphis, Tennessee

FAW & SHERROD
Phone 926-8164
Johnson City, Tennessee

INGLE-KNOX INSURANCE AGENCY
Phone 265-4541
Chattanooga, Tennessee

LIPSCOMB & PITTS CO.
Phone 272-2515
Memphis, Tennessee

Your policy backed by Assets over $42,000,000.00

Shelby Mutual Insurance Company
of Shelby, Ohio

*20% off on Hospital—Professional Liability

For Information on Hospital-Professional Liability and other coverages, please contact one of the agents listed.

NEEDED
GENERAL PHYSICIAN

Family Internist by four man group in growing rural program in West Virginia. Modern Clinic facilities, regularly visiting specialist consultant staff, scheduled training and vacation periods, foundation sponsorship, no investment required. Starting net income range $14,000-$18,000 depending on qualifications.

For Full Particulars Write Box 700 This Journal

Remember, Doctor—

It's been

Tafel Surgical Supply Co., Inc.

SINCE 1889

for

Drugs, Orthopedic, Surgical

Supplies & Equipment

1203 Church Street

Nashville, Tennessee

List of Advertisers in This Issue

American Cyanamid Company	VI, VII, XII, XVII, XXIV, XXV, XXIX, XXXIII
Ames Co., Inc.	XXXIX
Appalachian Hall	XXXIV
Brayten Pharmaceutical Co.	XIV
Burroughs Wellcome & Co.	XVI
Coca-Cola	XXI
Farringer & Company	XXXV
Guild Opticians	XXXIV
Hill Crest Sanitarium	XXI
Kay Surgical, Inc.	XXXVI
Lilly, Eli and Co.	I, XXVI
Mutual Benefit Life Ins. Co.	XXVIII
Nashville Pure Milk Co.	Last page reading
Nashville Surgical Supply Co., Inc.	XXII
Parke-Davis and Company	II
Physician, General	XXXVIII
Placement Service	XXXVII
Procter & Gamble	Insert
Robins, A. H. Co.	VIII, IX, XXIII
Roche Laboratories	XL
Saunders, W. B. Company	III
St. Albans	XXX
Searle, G. D. & Co.	XXVII
Smith, Kline & French Laboratories	XIII
Smith, Reed, Thompson & Ellis Co.	XXXII
Tafel Surgical Supply Co., Inc.	XXXVIII
U. S. Vitamin & Pharmaceutical Corp.	XV
VA Hospital, Murfreesboro	XXXVI
Wallace Laboratories	X, XI, XVIII, XXXI
White Surgical Supply Co.	XXXVI
Winthrop Laboratories	V

4189 020



"the same old story, doctor—indigestion"

The patient's complaint is indigestion...especially of intolerance to fried foods...aggravated by stress. You diagnose functional G.I. disturbance and associated stress...as manifested by flatulence, "nervous" indigestion and constipation. Prescribe

DECHOLIN-BB®
(Hydrocholeretic • Antispasmodic • Sedative, AMES)

Each Tablet Contains:

BUTABARBITAL SODIUM.....15 mg (¼ gr)
(Warning: May be habit forming) to ease nervous tension

DEHYDROCHOLIC ACID.....250 mg (3¾ gr)
to produce large volume of watery bile, hydrate the bowel contents and gently stimulate the intestinal mucosa

BELLADONNA EXTRACT.....10 mg (⅙ gr)
to reduce smooth-muscle hypertonus

Average adult dose: 1, or if needed, 2 tablets three times daily. *Precautions:* Observe patients periodically for increased intraocular pressure and barbiturate habituation or addiction. Caution drivers against possible drowsiness. *Side effects:* Dehydrocholic acid may cause transitory diarrhea; belladonna — blurred vision, dry mouth. *Contraindications:* Biliary tract obstruction, acute hepatitis, glaucoma, and prostatic hyperplasia. *Available through your regular supplier:* DECHOLIN-BB, bottles of 100 tablets. 72664

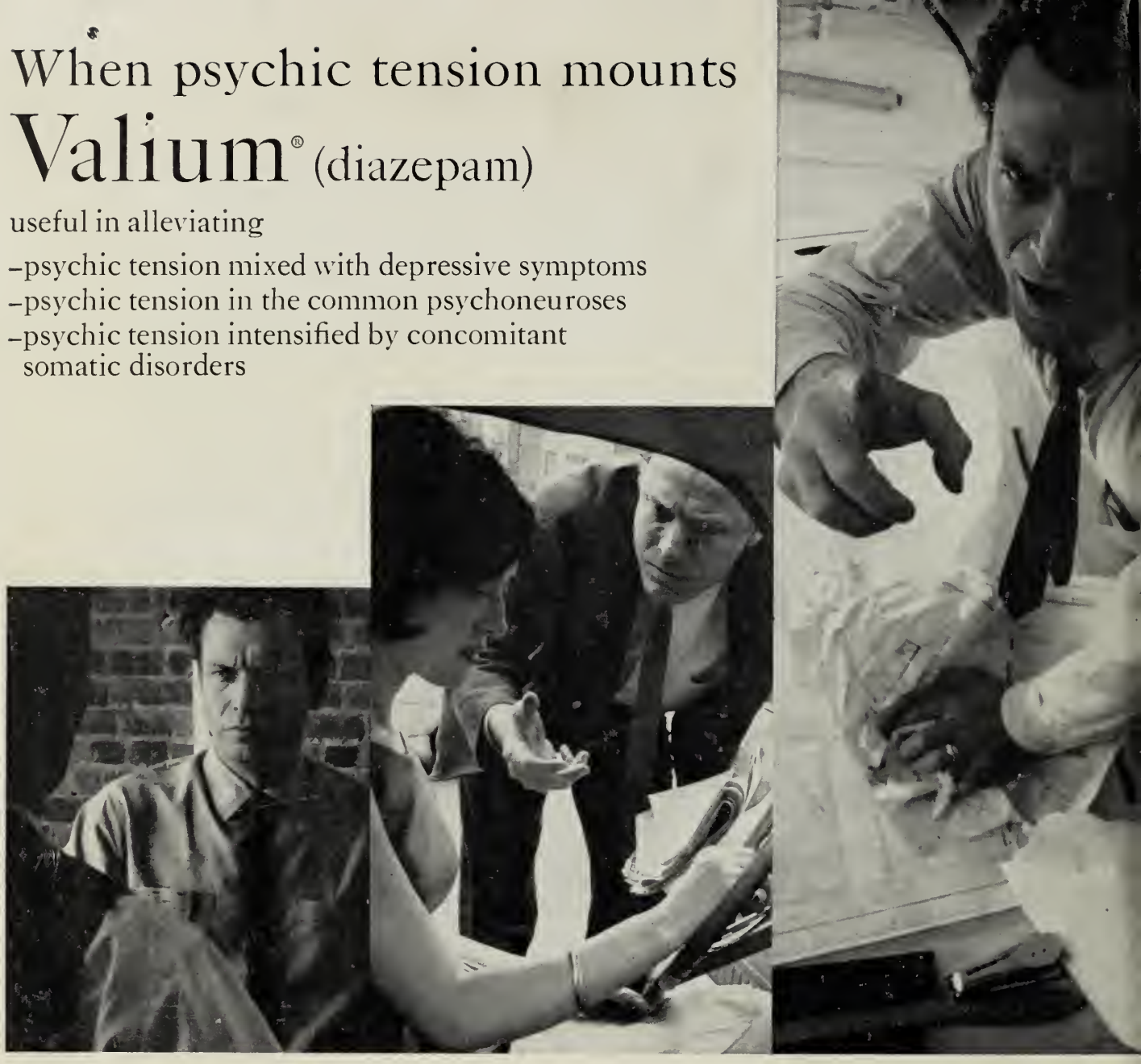
Ames Company, Inc., Elkhart, Indiana. AMES

When psychic tension mounts

Valium® (diazepam)

useful in alleviating

- psychic tension mixed with depressive symptoms
- psychic tension in the common psychoneuroses
- psychic tension intensified by concomitant somatic disorders



How to prescribe Valium (diazepam)

Indications: Valium (diazepam) is of use in dealing with anxiety reactions stemming from stressful circumstances or whenever somatic complaints are concomitants of emotional factors. It is useful in psychoneurotic states manifested by anxiety, tension, fear and fatigue.

Valium (diazepam) may also be useful in acute agitation due to alcohol withdrawal.

Valium (diazepam) may be of use to alleviate muscle spasm associated with cerebral palsy and athetosis.

Dosage and administration	*Usual daily dose*
Mild to moderate psychoneurotic reactions: Manifested by anxiety-tension alone or with depressive symptomatology, agitation, restlessness, psychophysiological disturbances	2 mg to 5 mg, 2 or 3 times daily
Severe psychoneurotic reactions: Where severe anxiety, fear, agitation, aggression or hostility exist alone or with depressive symptoms	5 mg to 10 mg, 3 or 4 times daily
Alcoholism: As an aid in symptomatic relief of acute agitation, tremor, impending or acute delirium tremens and hallucinosis	10 mg, 3 or 4 times during the first 24 hours; reducing to 5 mg, 3 or 4 times daily as needed
Muscle spasm associated with cerebral palsy or athetosis	2 mg to 10 mg, 3 or 4 times daily

Contraindications: Valium (diazepam) is contraindicated in infants, patients with a history of convulsive disorders or patients with a history of glaucoma.

Warning: Valium (diazepam) is not of value in the treatment of psychotic patients, and for this reason should not be employed in lieu of appropriate treatment.

Precautions: In elderly or debilitated patients, it is important to limit the dosage to the smallest effective amount to preclude the development of ataxia or oversedation (not more than 1 mg, 1 or 2 times daily initially, to be increased gradually as needed and tolerated). As is true of all CNS-acting drugs, until the correct maintenance dosage is established, patients receiving Valium (diazepam) should be advised against possibly hazardous procedures requiring complete mental alertness or physical coordination. Driving an automobile during the period of Valium (diazepam) therapy is not recommended. In general, the concurrent administration of Valium (diazepam) and other psychotropic agents is not recommended. If such combination therapy is used, careful consideration should be given to the pharmacology of the agents to be employed with Valium (diazepam)—particularly with known compounds which may potentiate the action of Valium (diazepam), such as phenothiazines, barbiturates, MAO inhibitors and other antidepressants.

Since Valium (diazepam) has a central nervous system depressant effect, patients should be advised against the simultaneous ingestion of alcohol and other central nervous system depressant drugs during Valium (diazepam) therapy. Safe use of Valium (diazepam) during pregnancy has not been established. The usual precautions are indicated when Valium (diazepam) is used in the treatment of anxiety states where there is any evidence of impending depression; particularly the recognition that suicidal tendencies may be present and protective measures may be necessary. The usual precautions in treating patients with impaired renal or hepatic function should be observed.

Side effects: In clinical use, fatigue, drowsiness and ataxia have been reported; in most instances these are dose-related and may be avoided by proper dosage adjustment. Mild nausea and dizziness may occur on occasion. As with any new agent, when it is administered for protracted periods of time, periodic blood counts and liver function tests are advisable. Abrupt cessation after prolonged overdosage may, in some patients, produce withdrawal symptoms (e.g., convulsions, tremor, abdominal and muscle cramps, vomiting, sweating) similar to those seen with barbiturates, meprobamate and Librium® (chlordiazepoxide HCl). Changes in EEG patterns have been observed in patients during and after Valium (diazepam) treatment.

Paradoxical reactions, such as excitement, depression, stimulation, sleep disturbances, acute hyperexcited states and hallucinations have been reported. Other side effects noted have been blurred vision, diplopia, headache, incontinence, slurred speech, tremor and skin rash.

Valium (diazepam) is available as 5-mg and 2-mg tablets. For convenience and economy in prescribing, both strengths are supplied in bottles of 50.

Roche Laboratories endorses the principle of caution in the administration of any therapeutic agent to pregnant patients.

ROCHE

ROCHE LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110

Brown University Library
3 1236 09012 1081

PERIODICAL

NONCIRCULATING